REPORT DOCUMENTATION PAGE

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE May-Jun 1999	3. REPORT TYPE AND DATES COVERED

4. TITLE AND SUBTITLE

Program Manager - A bimonthly Magazine of DSMC

5. FUNDING NUMBERS

6. AUTHOR(S)

Numerous Authors

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

Defense Systems Management College
Attn DSMC Press
9820 Belvoir Road Ste 3
Ft. Belvoir VA 22060-5565

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)

10. SPONSORING / MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION / AVAILABILITY STATEMENT

Distribution Unlimited

12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*

Program Manager is intended to be a vehicle for the transmission of information on policies, trends, events and current thinking affecting program management and defense systems acquisition.

14. SUBJECT TERMS

C-17 Program, Indian Head Division, Acquisition Community, Coast Guard.

15. NUMBER OF PAGES
114

16. PRICE CODE

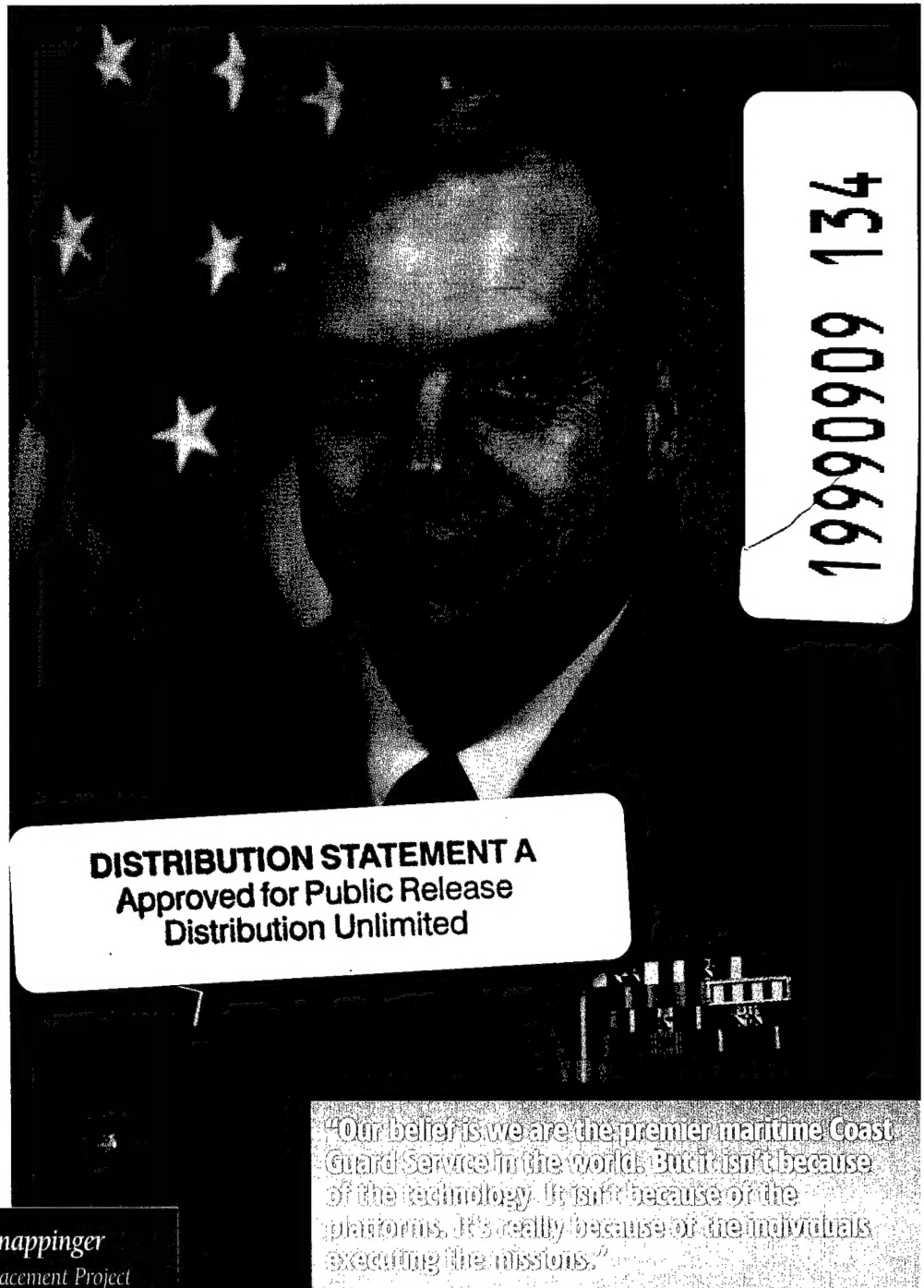| 17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT Unlimited

MAY–JUNE 1999

PM

PROGRAM MANAGER

INTERNATIONAL ACQUISITION/PROCUREMENT
SEMINAR – PACIFIC (P. 85)

Pentagon's New Systems
Acquisition Director Leads Push to
Reduce Acquisition Cycle Time for
New Programs by 50 Percent!

John C. Wilson Jr.
Director, Systems Acquisition
Office of the Under Secretary
of Defense
(Acquisition & Technology)

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1990909 134

"Our belief is we are the premier maritime Coast
Guard Service in the world. But it isn't because
of the technology. It isn't because of the
platforms. It's really because of the individuals
executing the missions."

Coast Guard Capt. Craig L. Schnappinger
Project Manager, Deepwater Capability Replacement Project

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Coast Guard Set to Rejuvenate Ailing Fleet

Deepwater Picked to Change the Way
the Coast Guard Does Business

C. TYLER JONES

emper paratus — always ready — is a great motto. But if the Coast Guard continues along the path it is on, a more accurate motto might read — always ready, but not operationally effective.

To avoid any such reputation, the country's oldest continuous seagoing Service is undertaking the largest acquisition effort in its history. Dubbed Deepwater, the project is designed to overhaul the Coast Guard's outdated assets — basically, its entire fleet of major cutters and aircraft and all its communications and observation equipment — and update or replace them with technology of the 21st century.

Coast Guard Capt. Craig L. Schnappinger, Deepwater Capability Replacement project manager, said that he will do whatever it takes to start seeing the benefits of Deepwater by 2002, because Coast Guard men and women are working hard and at times needlessly risking their lives. "I say needlessly because there's technology there that would make it easier and safer for them to do their jobs."

Schnappinger explained that the Coast Guard's deepwater-cutter fleet is the 38th oldest of 42 similar fleets in the world. Most of the ships in the Coast Guard's deepwater inventory were built between 1964 and 1972.

PROJECT MANAGER REFLECTS

Jones is editor, Program Manager *magazine, Visual Arts and Press Department, Division of College Administration and Services. He was the 1997 Military District of Washington Journalist of the year.*

He said that ship age is not the worst of their problems. Their biggest shortfalls come in the area of command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR).

With the problems becoming more apparent with each mission, Coast Guard Operations initiated the Deepwater project by performing a mission analysis report and a missions needs statement, he said. Significant gaps in the execution of missions in the deepwater environment were identified.

Operating Environments and Missions

Schnappinger said the Coast Guard has three operating environments: inland,

which covers rivers and lakes; coastal, which covers the area from the shore line to 50 miles out to sea; and deepwater, which is 50 miles or greater offshore and situations requiring long transits or extended duration on scene.

The Coast Guard has 14 major missions when it comes to operating in the deepwater environment. These missions are categorized as maritime safety, maritime law enforcement, marine environmental protection, and defense operations.

In times of war, Schnappinger explained, the Coast Guard, which normally falls under the Department of Transportation, becomes part of the Navy. He said the Navy has an interest in the Deepwater project and how it will affect the Coast Guard, because "if the big balloon goes up, we will sail with them in regular day-to-day ops," he said. One of the requirements of Deepwater is that the Coast Guard be interoperable with the Navy.

Most recently, the Coast Guard has been doing defense operations in the Persian Gulf. Schnappinger said DoD has been using them for contraband interdiction to enforce the embargo against Iraq. The Coast Guard has also performed missions in Bosnia and other Balkan states; and they've done joint training operations with Russia.

Out-of-Date Resources
Although their most recent missions with the Navy and DoD haven't been negatively affected because of outdated resources, other missions have.

Because the Coast Guard is operating with 1950-to-1960's technology, Schnappinger said, "Drug smugglers and others who do not want to be caught often have more technologically sophisticated equipment and boats than we do, making it harder to catch them." He explained that "even if we spot drug smugglers, we often have a hard time catching them because the 'bad guy's' cigarette boats can do 50 knots or faster."

At present, the Coast Guard stops 10 percent of the flow of illegal narcotics into

"In any project you want to make sure that you truly capture total ownership cost, so [you] carry the design as far as you can before you select the winning team."

the country by maritime routes. Schnappinger said "The nation's drug-control strategy expects us to double that seizure rate by 2002." He added that "this is a tall order for our aging and technologically challenged fleet of assets."

In addition to stopping the flow of narcotics, the Coast Guard must also meet search-and-rescue mission requirements, such as being on scene within two hours of a distress call. "Are we capable of doing that? Not if we have our resources spread too thin," he said.

"The bottom line is that the demands for our services are currently greater than what we can provide," Schnappinger said. He added that "Because of the lack of resources, we've had to prioritize missions. For example, if we are doing a law enforcement drug-interdiction mission and we get a radio dispatch for a search-and-rescue case, priority-wise we will divert from the law enforcement mission to the search-and-rescue mission."

Lack of Assets
One area in particular where the Coast Guard falls short is with its surveillance and communications equipment. Schnappinger explained that "When we do law enforcement exercises, such as trying to spot drug smugglers in a particular area, we fly a manned aircraft overhead looking. But, we're not looking with radar; we're looking with our eyes because that's the level of sophistication we have." At night, line-of-sight visibility is especially limited.

Schnappinger explained that "a lot of things probably get missed using line of sight, so we also put out ships to patrol a particular area and do radar sweeps. But, if a contact does not want to be seen, they're not going to have a high radar cross-section; therefore we're going to have limited probability of seeing them."

Another problem that arises from depending on line-of-sight visibility is that it is hard for Coast Guard aircraft to avoid observation because they must fly close enough to a suspect vessel to make a visual identification.

1 Revenue Cutter HARRIETT LANE, April 1861

2 1890's Revenue Cutter BEAR on Bering Sea Patrol

3 Coast Guard Cutter SENECA around 1915 doing derelict destruction

4 Revenue Cutter SNOHOMISH early 20th Century (perhaps around 1910). Editor's note: Revenue Cutter Service became the Coast Guard in 1915 - hence some are Revenue Cutters and others are Coast Guard cutters.
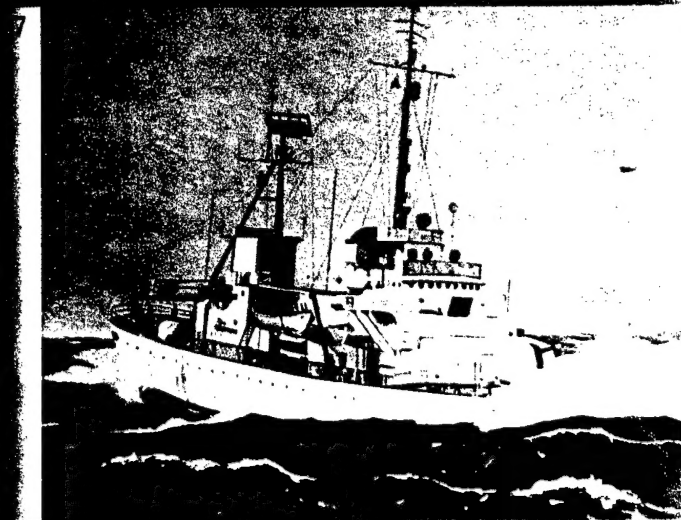
5 Treasury Class cutter CAMPBELL on convoy escort duty during WWII

6 Hamilton Class cutter CHASE

7 Unidentified 1950's cutter on ocean station duty

8 Multi-hull platforms are one of many technological innovations being considered in Deepwater

9 Artist rendition illustrating future possibilities for the Coast Guard
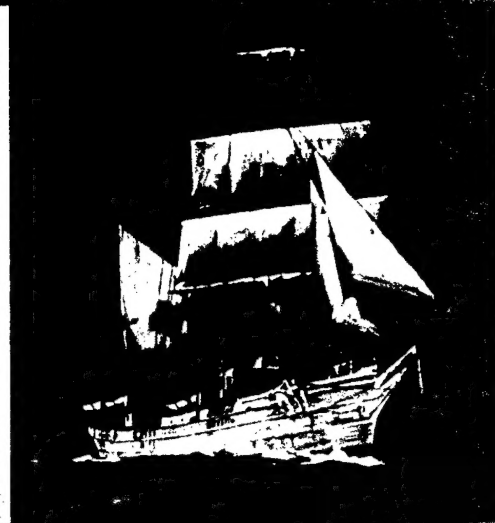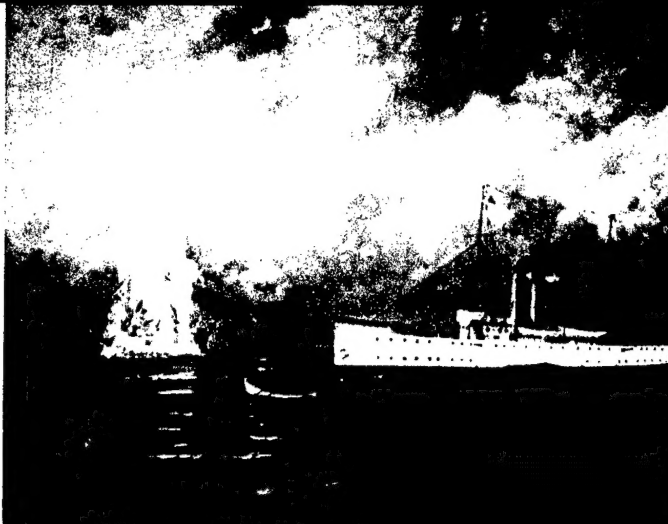
CAPT. CRAIG L. SCHNAPPINGER

Deepwater Project Manager

Capt. Craig L. Schnappinger was appointed as the project manager for the Coast Guard's Deepwater Capability Replacement Project Feb. 1, 1997.

As the Deepwater Project Manager, he is responsible for the largest acquisition project in the history of the Coast Guard. This project marks the first time a federal agency has approached an acquisition from an entire mission perspective. The current assets replacement values range from $7.5 to $15 billion.

Schnappinger was born Feb. 12, 1953, in Baltimore, Md. He received his undergraduate degree from the U.S. Coast Guard Academy and earned a master's degree from the University of Illinois. He is a graduate of the Advanced Program Management Course, Defense Systems Management College, and brings extensive project management experience to the Deepwater project.

Prior to his current assignment, Schnappinger was selected as a member of the the Coast Guard's Reengineering Team, responsible for "right-sizing" the entire Coast Guard. His emphasis was base realignment and Support Center conversions. From 1992-96, he was assigned as chief civil engineer for the Pacific area. Previous assignments included: base engineer, Air Station Cape Cod; and assistant dean and associate professor, U.S. Coast Guard Academy.

Over his 22 years of service he has developed extensive experience in engineering, contracting, education, fiscal management, and project management. He has served on numerous international committees.

Schnappinger has three children and lives in Springfield, Va., with his wife, Patti.

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the premier maritime Coast Guard Service in the world. But it isn't because of the technology. It isn't because of the platforms. It's really because of the individuals executing the missions."

A New Way Of Thinking

One thing that sets Deepwater apart is that it is a new way of thinking about acquisition. Instead of giving industry any detailed specifications, he said, they have stayed as close to system performance specifications as possible. "If you read our system performance spec ... with industry, it doesn't say that there is a ship in the mix, it doesn't say there's an aircraft. It says we have to have the capability to survey areas [and] to identify things in those areas ... That's a real simplistic thing."

The Coast Guard has given industry a clean piece of paper and said, "Here's what we must execute mission-wise. Come up with a concept and a system of assets that will allow us to execute those missions as effectively as possible and at the lowest total ownership cost," Schnappinger said.

"The idea is to challenge industry to be as creative as possible, to make them feel that they're part of the team ... that they are working with us to solve a problem that we, the Coast Guard, the nation has," he added.

Status Report

Deepwater is currently in the concept exploration phase. Schnappinger said they've passed their first milestone or Key Decision Point, which was getting approval for the mission analysis report and mission needs statement. He said that was done in 1996.

Schnappinger said a request for proposal was "put on the street" and contracts were awarded to three industry teams in August of 1998.

One team consists of Avondale Industries, Inc. (prime contractor); Boeing-McDonnell Douglas Corporation; John J. McMullen & Associates, Inc.; DAI, Inc.; and Raytheon Systems Company.

If it is determined that a vessel is "hot or tainted," the crew of the plane has to get that information to a ship that might be 50 miles away, because the suspect vessel can't be boarded from a plane. Schnappinger said, "We don't want to communicate in the clear, and the only way to communicate from air-to-surface is voice-to-voice not datalink-to-datalink. Frequently our air platforms can't get the surface platform in a secure voice link."

What happens then is that the plane must fly back to an air base, land, and verbally relay the information, which is then electronically teletyped over a secure wire to the communications center of the ship. "How long is that time duration from the time you identified and spotted the suspect vessel until it gets to the ship that is actually going to interdict or pursue that vessel? Quite a while. How many of those do we miss? Quite a few," Schnappinger added.

One possible Deepwater solution to this problem is to use satellite coverage or unmanned aerial vehicle coverage to get the data and dispatch it to pursuit platforms — air or surface. Schnappinger said that will give the Coast Guard "the capability of knowing what's happening in maritime areas that we're responsible for monitoring, without having to have countless manned resources boring holes in the sky or basically getting beat up in the oceans in order to get that [the same information]."

Despite the Coast Guard's lack of assets, Schnappinger said, "Our belief is we are

Another team consists of Lockheed Martin Government Electronic Systems (prime contractor); Litton Ingalls Shipbuilding; Litton PRC; M. Rosenblatt & Son; Sperry Marine, Inc.; Litton Data Systems; Halter-Bollinger Joint Venture; Bell Helicopter Textron; Lockheed Martin Information Systems; Lockheed Martin Ocean Radar and Surveillance Systems; Lockheed Martin Sanders; Lockheed Martin Aeronautical Systems; Lockheed Martin Federal Systems; Lockheed Martin Management and Data Systems; LOGICON; L3 Communications, Inc.; and PROSOFT.

The third team consists of Science Applications International Corporation (prime contractor); Marinette Marine Corporation; Sikorsky Aircraft Corporation; Soza & Company, Ltd.; Bath Iron Works; CTM Automated Systems; AMSEC; Fuentez Systems Concepts, Inc.; Gibbs & Cox, Inc.; and Interactive Television Corporation.

During the design process, the contractors will develop concepts for an Integrated Deepwater System. Schnappinger said the contracts include a 16-month conceptual design stage, immediately followed by a 16-month functional design stage.

Schnappinger said he is extremely pleased with the project so far. "We laid out what is probably the most aggressive acquisition schedule certainly in our history. From being at DSMC, it seems more aggressive than what most DoD projects work at."

Schnappinger said the Coast Guard is planning to award the contract to begin final detailed design and construction in 2002. Realistically, he said, the first ship would probably come out of the shipyard in 2005.

"However, since we're talking about a system of assets, industry could propose to provide new sensors on our air platforms, could introduce unmanned aerial vehicles, or lease into satellite data that could start to benefit the Coast Guard's C4ISR sensor equipment in late 2002 or early 2003."

"The biggest obstacle is probably going to be making government and private citizens realize what value the Coast Guard adds to the nation."
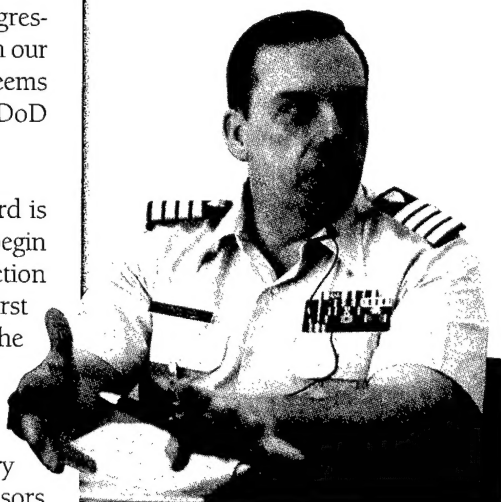
SCHNAPPINGER, DIRECTOR OF DEEPWATER, "AGGRESSIVE ACQUISITION SCHEDULE" DURING AN INTERVIEW WITH PROGRAM MANAGER MAGAZINE.

Obstacles

As with any acquisition project there are going to be obstacles, especially budgetary. According to Schnappinger, the biggest obstacle is probably going to be making government and private citizens realize what value the Coast Guard adds to the nation. They must educate and inform them that the Coast Guard can't continue to do business the same way it has in the past and be effective in the 21st century.

From talking to other DoD acquisition people and professors at DSMC, Schnappinger believes that in any project "you want to make sure that you truly capture total ownership cost, so [you] carry the design as far as you can before you select the winning team." Schnappinger said despite initial budgetary constraints "we have recently modified our contracting strategy to double the duration of the Deepwater design process."

The DSMC Edge

Schnappinger said his time at the Defense Systems Management College was beneficial. The difficult part was the first few weeks when he had to walk around with a glossary because terms and acronyms he had never heard before were flying at him from all directions.

Throughout his Coast Guard acquisition career, Schnappinger has tried to keep some contacts at DSMC and use them in an advisory capacity. Although he learned a lot during his time at DSMC, he often found it challenging because the acquisition language and practices the Coast Guard uses are different in some areas than what DSMC teaches. He added, "It would be real valuable if there were a group of people over there [at DSMC] that understood Coast Guard acquisition [and] our budget process a little better so that I could use them kind of as an expert advisor/think tank."

Only Time Will Tell

"If I want to be remembered for something, it's that we've given the men and women of the Coast Guard the tools they need to get their job done safer and more efficiently," Schnappinger concluded.

Pentagon Systems Acquisition Director Speaks to Graduates of APMC 99-1

COLLIE J. JOHNSON

John C. Wilson Jr., didn't deliver a "climb every mountain," "go out and conquer the world"–type message to the graduates of DSMC's Advanced Program Management Course (APMC) 99-1. Instead, the Pentagon's new Director of Systems Acquisition in the Office of the Under Secretary of Defense (Acquisition & Technology) gave them a substantial dose of common sense and good, practical advice on a subject they'll all have to deal with sooner or later.

Speaking from Essayons Theater, Fort Belvoir, Va., April 16, Wilson spoke about a critical component of the Revolution in Business Affairs – one that has a direct bearing on DoD's ability to operate in the changing security environment: *acquisition program cycle time.*

Why the Focus on Cycle Time?

"Cycle time," says Wilson, "is the period of time that it takes from program start to achievement of IOC [Initial Operating Capability]." He notes that the average cycle time for major defense acquisition programs started since 1960 has been 132 months or 11 years. "Many of the programs take even longer, some achieving IOC after 15 or 20 years of development."

The need for reducing acquisition cycle time, Wilson told the graduates, has long been recognized by acquisition management leadership. The Packard Commission, the FASA [Federal Acquisition and Streamlining Act] of 1994, and the
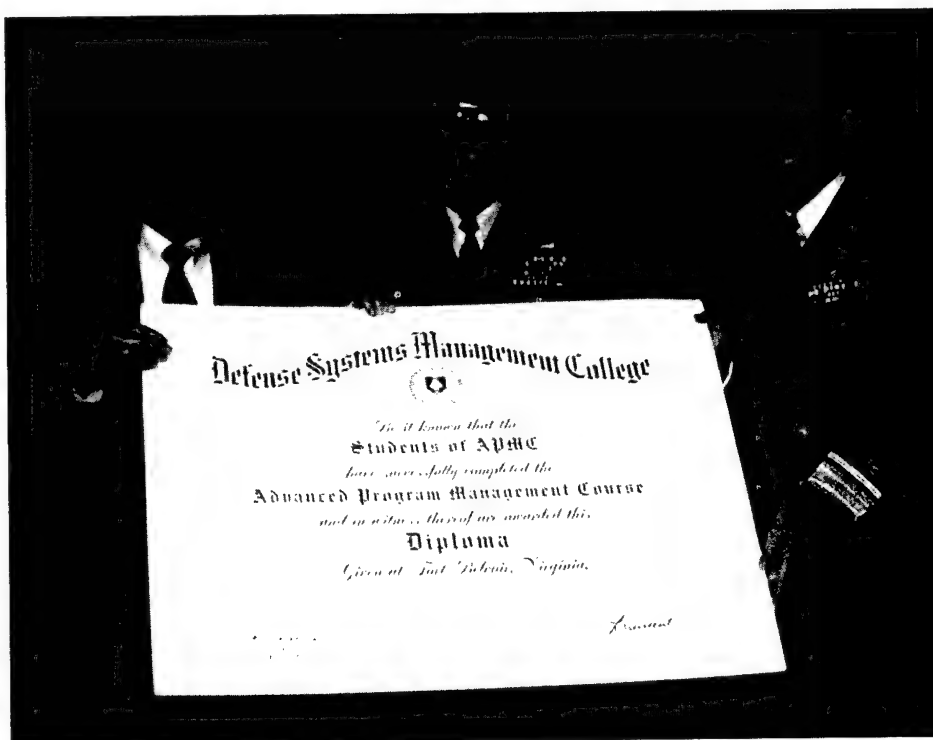
FROM LEFT: JOHN C. WILSON JR., DIRECTOR OF SYSTEMS ACQUISITION, OFFICE OF THE UNDER SECRETARY OF DEFENSE (ACQUISITION & TECHNOLOGY), AND APMC 99-1 GRADUATION SPEAKER, PRESENTS AN OVERSIZE DIPLOMA TO CLASS PRESIDENT, NAVY CAPT. CURTIS A. KEMP. KEMP ACCEPTED THE DIPLOMA ON BEHALF OF THE 361 GRADUATES OF APMC 99-1. ALSO ASSISTING IN THE PRESENTATION IS NAVY REAR ADM. LENN VINCENT, DSMC COMMANDANT. THE TYPICAL STUDENT OF CLASS 99-1 WAS 41.6 YEARS OLD, WITH 18 YEARS OF GOVERNMENT SERVICE AND 11 YEARS OF PRIOR ACQUISITION EXPERIENCE. ON AVERAGE, 68.1 PERCENT OF THE STUDENTS HAD A MASTER'S DEGREE OR HIGHER.

National Partnership for Reinventing Government have all stated that the Defense Department should reduce cycle time. He points out that recently, the Defense Systems Affordability Council tasked the acquisition community to reduce acquisition cycle time for new programs by 50 percent.

Wilson believes that DoD is badly disadvantaged by long acquisition cycle times, which he calls a serious problem that program managers must address *now.* To illustrate, he cites the F-22 Raptor, which has been in development since 1986. "Now, more than a dozen years later," says Wilson, "the F-22 aircraft is

Johnson is managinge editor, Program Manager *magazine, Visual Arts and Press Department, Division of College Administration and Services, DSMC.*

Photos by Richard Mattox

Government employees may receive a free copy of DSMC's popular guidebook, *Joint Logistics Commanders' Guidance for Use of Evolutionary Acquisition Strategy to Acquire Weapon Systems,* by faxing a request to the DSMC Distribution Center, Attn: Jeff Turner (Comm: 703-805-3726; DSN 655-3726).

Be sure to put your request on official letterhead. Nongovernment personnel can find information on ordering the guide at **http://www.dsmc.dsm.mil/ pubs** on the DSMC Web site.
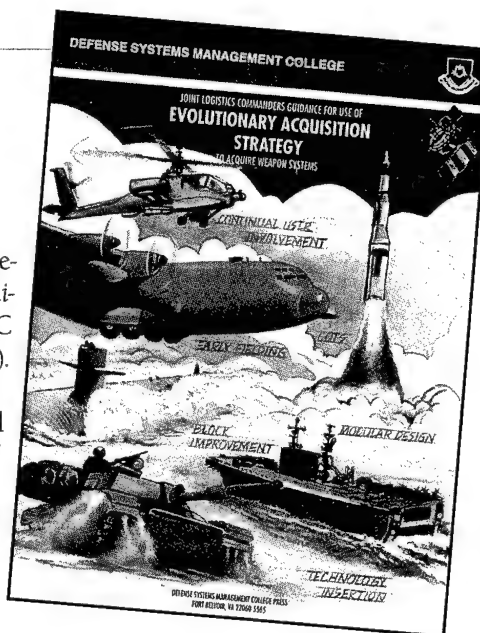
still in development, the Soviet Union has collapsed, U.S. pilots are engaged in combat operations over Iraq and Yugoslavia, our greatest concerns about missile development emanate from Iran and North Korea, and a Pentium II microprocessor runs at 627 megahertz per second ... By the time the F-22 is fielded in 2005, what threats will dominate our headlines and our military operations? What new technologies will shape our lives? Technology is advancing just that rapidly."

An unavoidable conclusion, says Wilson, is that we are currently spending a significant portion of our authorized funds to develop and build systems that will *not* suitably address our needs when they are finally fielded. Furthermore, as the pace of technological change increases, systems that require a decade or more to field are *technologically obsolete* before IOC is achieved.

Retrofitting, he explains, is not a cost-effective option. Concerns even arise that the spare parts will not be available soon after these systems are in the field. Finally, the longer a system's cycle time, the greater likelihood of budget instability and requirements creep.

Evolutionary Acquisition

In trying to reduce a system's cycle time, Wilson names three kinds of uncertainty program managers must deal with: uncertainty related to the requirements, uncertainty associated with technology, and uncertainty related to funding. "Reduc-

ing cycle time," according to Wilson, "requires we minimize uncertainty *before* program initiation.

"Because we expect each generation of technology to be a revolutionary leap ahead of the last generation," he says, "we try to fund requirements ten to 15 years in the future. As the F-22 example demonstrates, not only does this practice cause us to design systems based on our 'best guess' of future threats and technology (which is often inaccurate), but it also extends cycle times by making us repeatedly revise the program to incorporate new developments." Instead, he counters, DoD should express requirements in incremental terms, looking ahead *five* years rather than 10 or 15.

He notes that the Joint Staff is currently revising the requirements generation instruction to adopt such time-phased evolutionary requirements.

"We [USD(A&T)] will support the shift to evolutionary requirements by making evolutionary acquisition the preferred way to do business. This method has usually been associated with information technology acquisition, but in order to be more responsive and flexible with the limited budgets and our changing threats, we need to use an evolutionary acquisition strategy for most — not necessarily all — but *most* of our weapon systems development."

He explains that evolutionary acquisition entails defining requirements and building systems in blocks so that the urgent needs are met quickly and longer-term requirements are met by demonstrations, exercises, and experiments. Evolutionary acquisition, says Wilson, allows for rapid fielding and continuous

Join Wilson on Reducing a System's Acquisition Cycle Time

- Consciously separate technology development from acquisition

- Commit to an evolutionary acquisition approach as the standard from which DoD will do business from now on

- Advocate Modeling and Simulation to further Simulation-Based Acquisition

- Advocate and seek as fully and completely as possible the funding that will allow a program to be quickly and efficiently executed

improvement. "We need to make it the preferred way."

Separate Technology Development From Acquisition

Wilson speaks of another important piece to the puzzle for cycle-time reduction — the separation of technology risks from acquisition. "Having a project designated as an acquisition program is one of the few ways to obtain funding for technology development," he told the graduates. "I believe we need to create an alternative method that would encourage and support technology development activities without committing the Department to full-fledged acquisition of a system."

At present, ACTDs [Advanced Concept Technology Demonstrations] provide one such alternative, according to Wilson. "We should enable broader use of demonstration projects in order to fund technology development outside the acquisition system. By doing so, we are not just attempting to reduce cycle time with the stroke of a pen. The demonstration is not an acquisition program — intentionally so. The execution of a demonstration project has a single specific goal: the demonstration of an operational capability."

Wilson goes on to say that the successful demonstration will incorporate both the satisfaction of an operational need and the feasibility of the selected approach. "It is important to note," he says, "that an acceptable result of a demonstration project is that technology may have insufficient utility or is not feasible and must be studied further or killed. And killing off poor technological solutions early *before* substantial sums of money are committed," he emphasizes, "is an important byproduct of the new approach."

Moreover, evolutionary acquisition, he contends, will make even better use of DoD's Research, Development, Test and Evaluation (RDT&E) dollars than the traditional acquisition model does. By adhering to the new approach, he told the graduates, a large proportion of the RDT&E budget can be pooled and thus expended more efficiently than under the current process where these funds are divided up among a myriad of acquisition programs.

Simulation Based Acquisition

Wilson also speaks of another initiative DoD is focusing on to reduce the technology risk and cut cycle time — Simulation Based Acquisition (SBA). Ultimately, he believes that SBA will affect DoD's ownership costs such as those in the logistics support area that generally are the drivers of life cycle cost.

SBA cuts cycle times, he notes, by getting rapid answers to questions about requirements and designs and by distributing them simultaneously to many users. And program managers, he believes, can incorporate SBA into their programs without significantly expanding cycle time.

The Pocketbook Issue

Program managers, says Wilson, are often motivated to initiate acquisition as soon as possible to secure funds for their programs. "We should fund fewer programs but should fund them appropriately for completion within the FYDP [Future Years Defense Program]. We want to screen new starts and see if we can afford them and then fund them, optimally, before the Department makes acquisition commitments.

"Unless we control what goes into the acquisition pipeline from the beginning," Wilson concludes, "we will not make significant impact on cycle times."

He notes that cycle times have already started to come down from their historic average of 132 months. A few recent programs stand out, using commercial technology and innovative contracting arrangements. The Navy's UHF follow-on program was able to meet IOC in 65 months; the Army's ATACM modification program was at IOC in 48 months. Also using existing technology, the Air Force is on track to deliver JDAM [Joint Direct Attack Munition] in 71 months.

"The key to achieving 50-percent reduction in cycle time is a commitment,"

Wilson says, "an active involvement by program managers."

The Challenge

Concluding his remarks, Wilson enjoined the graduates to "look at how you can deliver your program or project faster." Whether in industry or government, Wilson urged them to:

- Consciously separate technology development from acquisition.

- Commit to an evolutionary acquisition approach as the standard from which DoD will do business from now on.

- Advocate modeling and simulation to further Simulation Based Acquisition.

- Advocate and seek as fully and completely as possible the funding that will allow a program to be quickly and efficiently executed.

"By cutting acquisition cycle times, our nation will reap many benefits," Wilson concludes. "We will spend money only on what we need; we will field only state-of-the-art technology; and we will avoid the unstable budgets and creeping requirements for which DoD has been notorious." But more importantly, he notes, "We will save taxpayers' dollars, and we will get better equipment into the hands of the warfighter — *faster*."

Wilson reminded the graduates that while *today* they're leading programs as senior managers in government and industry, *tomorrow* they'll be leading the Department and private industry as senior leaders. "I'm asking you to take up this challenge and run with it," he told the graduates, "not only through the life cycles of your programs (which I hope will be short), but as you implement your own visions of defense policies. If you do, we will be prepared for whatever may emerge from tomorrow's headlines."

Check Out This Exciting New Web Site!

http://www.acq.osd.mil/nssa/

Policy Aims at World-Class Acquisition Force

JIM GARAMONE

WASHINGTON – It's a fact of life that if you don't stay on top of what's happening in your career field, you will be left behind.

Staying on top is the drive behind DoD's new standards for the acquisition workforce. "If you look throughout the commercial world at particularly successful companies, the focus on continuous education is something you see consistently across the board," said Stan Soloway, Deputy Under Secretary of Defense for Acquisition Reform.

DoD has established a continuous education baseline for its 100,000 acquisition professionals. All acquisition personnel work toward certification in their fields. DoD certifies in three levels, and the requirements are laid out in DoD Publication 5005.2M.

Level I (roughly GS-5 to GS-9) certification in contracting, for example, requires one year of contracting experience, a four-year degree or 24 semester hours in certain courses, and the Level I course offered through the Defense Acquisition University. Level II (roughly GS-10 to GS-12) requires two years of experience, the same education requirement and courses in contract law. Level III (roughly GS-13 and above) requires four years of experience, the same education requirement and a Level III contracting course.

Those already certified must receive 80 hours of continuous education every two years.

The DoD acquisition world is changing rapidly. DoD acquisition personnel have new methods, new procedures, and new tools to learn and use, Soloway said. They must keep current. "The beauty of it is that our workforce is very eager to get out there and to take advantage of whatever professional development and professional improvement opportunities exist," he said.

The initiative is aimed at 11 career fields: program management; communications-computer systems; contracting, including construction contracting; purchasing; industrial/contract property management; systems planning, research, development, and engineering; test and evaluation; manufacturing, production, and quality assurance; acquisition logistics; business cost-estimating and financial management; and auditing.

While professional certification is the goal of the initiative, there's a fair amount of flexibility in the system. Personnel can take non-government courses at universities, community colleges, or professional organizations. They can also get credit for researching papers and delivering professional papers at conferences.

The kinds of personal and professional development courses available through the Office of Personnel Management – attributes of leadership and so forth – also count toward the 80-hour requirement, Soloway said.

Personnel can use government time for the classes and, if the course is required for certification, the government will pay for it.

Supervisors must certify employees have achieved the 80 hours over two years. "We put that into the policy for two reasons," he said. "We wanted to send a very strong signal to the workforce how seriously we take this and how strongly we believe they've a responsibility to pursue this development.

"The bigger reason was we wanted to ensure supervisors were very clear that this is a top priority of leadership," Soloway continued. "We wanted to hold people responsible for making sure their employees were encouraged and enabled to go out and get the training they need.

"You sometimes hear from the workforce that 'every time I go to get training I'm told there's no budget or there's no time or what-have-you.' We want to make clear to both sides that you've got to figure a way to budget it, and you've got to find a way to make time."

The policy requires each of the Services to earmark a certain amount of money to enable acquisition workers to complete their certifications.

Employees who do not meet the biennial 80-hour training requirement are put on probation and given extra time to finish. If they still don't meet requirements at the end of pro-

bation, they can lose their certification and could be denied opportunities for promotion.

Employees can't be fired for not doing their continuous education, but, Soloway said, "We sure as heck don't have to promote them, and we sure as heck don't have to allow them to maintain a certification for which they are not doing their requisite development."

This policy is just a departmental baseline, so organizations are free to do more if they wish, Soloway said. Some agencies have, in fact, adopted different, more stringent training requirements. Even before the DoD policy, for example, the Army Communications-Electronics Command required 80 hours of training for all workers and a tougher 160 hours every two years for supervisors.

"We want our folks to have the tools and the knowledge that enable them to go out and do what we're asking them to do, effectively and efficiently and productively," Soloway said. "We want them to feel comfortable taking risks, comfortable with making decisions rather than operating through the rigid rule books of the past.

"In order to get people to those comfort levels, they've got to have the tools," he said. "This policy is one way in which we very directly say to the workforce, 'We want you to have the tools; we're going to insist you take advantage of this because the two together create a world-class workforce.'"

DSMC Hosts First-Ever PEO/SYSCOM Commanders' Workshop

"Product Support and Commercial Business Environment"

C. TYLER JONES

reek philosopher Heraclitus once said, "Nothing is permanent but change." No place is this more evident than within the Department of Defense. To meet warfighters' future needs for mobilization and sustainment, the Department is transforming its mass logistics system into a highly agile and reliable system that delivers logistics support "on demand."

Because no military model exists, DoD has turned to the commercial marketplace to learn how "world-class firms" effectively and efficiently deal with various logistical issues. A recent forum where these issues were discussed was the first-ever PEO/SYSCOM Commanders' Workshop at the Defense Systems Management College, Fort Belvoir, Va., April 13 - 14.

The college's commandant, Navy Rear Adm. Leonard "Lenn" Vincent, greeted more than 300 participants, including senior acquisition and logistics policymakers, managers in the defense establishment, and representatives from industry by saying the theme of "Product Support and Commercial Business Environment" describes exactly the culture DoD needs to be moving into.

"The basis for this transformation is the belief that DoD could emulate the practices that make commercial businesses successful. Not that the government can
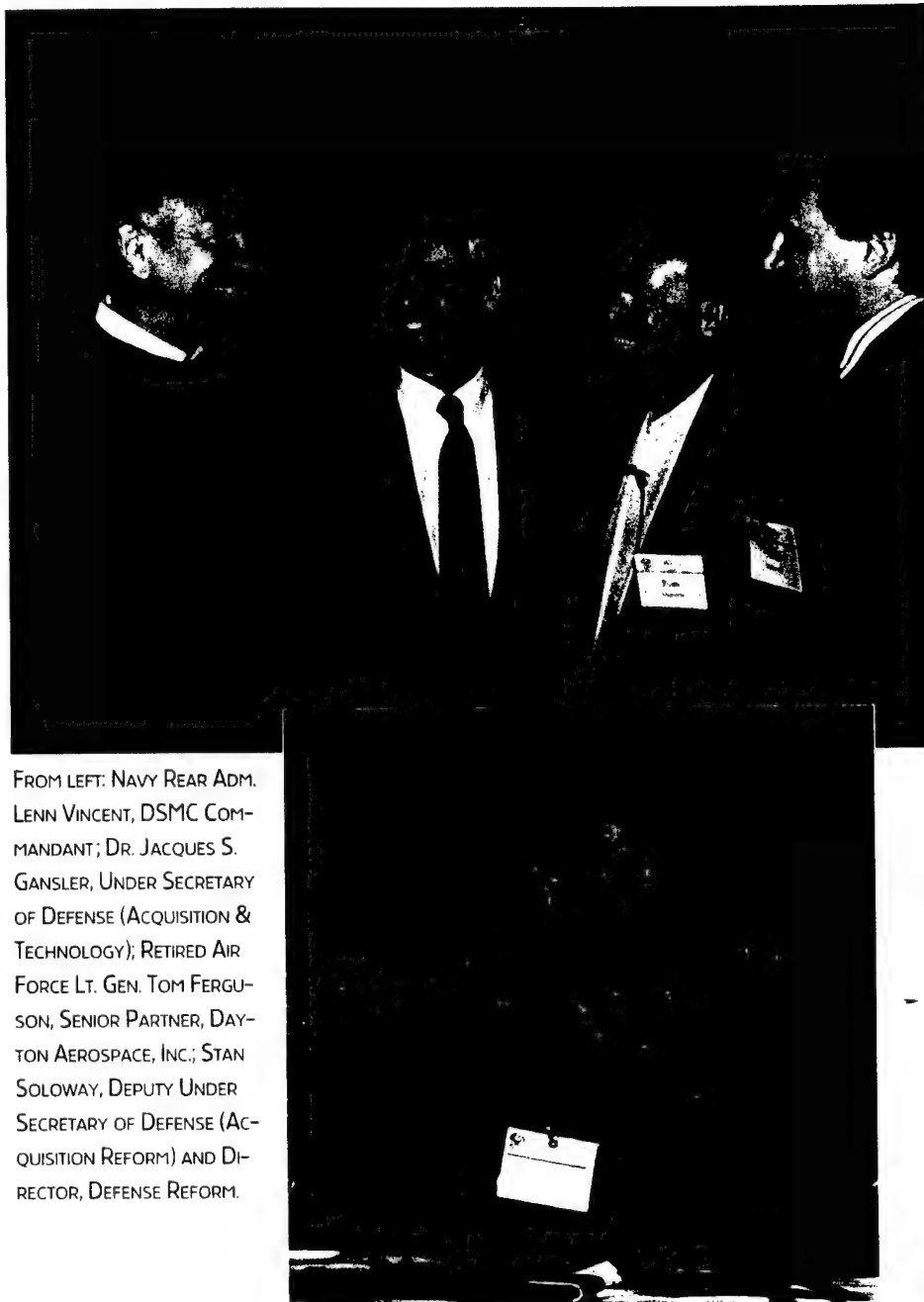
FROM LEFT: NAVY REAR ADM. LENN VINCENT, DSMC COMMANDANT; DR. JACQUES S. GANSLER, UNDER SECRETARY OF DEFENSE (ACQUISITION & TECHNOLOGY); RETIRED AIR FORCE LT. GEN. TOM FERGUSON, SENIOR PARTNER, DAYTON AEROSPACE, INC.; STAN SOLOWAY, DEPUTY UNDER SECRETARY OF DEFENSE (ACQUISITION REFORM) AND DIRECTOR, DEFENSE REFORM.

ARMY MAJ. GEN. AL SULLIVAN

Jones is editor, Program Manager magazine, Visual Arts and Press Department, Division of College Administration and Services, DSMC.

AIR FORCE COL. ROSANNE "RO" BAILEY, AIR ARMAMENT CENTER

> **The challenge is to change the process and the infrastructure that was very good for the 20th century, but is, I truly think, out of sync with the 21st century.**
>
> —Dr. Jacques S. Gansler

NAVY VICE ADM. JOHN A. LOCKARD, NAVAL AIR SYSTEMS COMMAND

VICKY FARROW, CHIEF LEARNING OFFICER, LUCENT TECHNOLOGIES, INC. AS LUNCHEON SPEAKER ON DAY 2 OF THE WORKSHOP, FARROW SPOKE ON "RESPONDING TO CHANGE: A LUCENT TECHNOLOGIES PROGRAM FOR GROWTH."

NAVY VICE ADM. JAMES AMERAULT, DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS) (OPNAV N4). AMERAULT SERVED ON THE SENIOR LEADERSHIP PANEL.

or should operate exactly like those businesses, but we have to instill in our workforce some of those cultural values that make our United States economy the envy of the world."

Vincent said that although "we initiate this process with our students right here in the classrooms [and that] Dr. Gansler has stated that training our workforce in new ways of doing business must be our No. 1 priority," nearly half of the 9,000 students (per year) who take classes here "feel that they are not going to be able to go back to their work

SPRING 1999 PEO/SYSCOM

Commercial Operations & Support Savings Initiative (COSSI) Exhibit.

Air Force Maj. Gen. Claude Bolton, AF Program Executive Officer for Fighter and Bomber Programs. (Bolton is a former DSMC Commandant.)
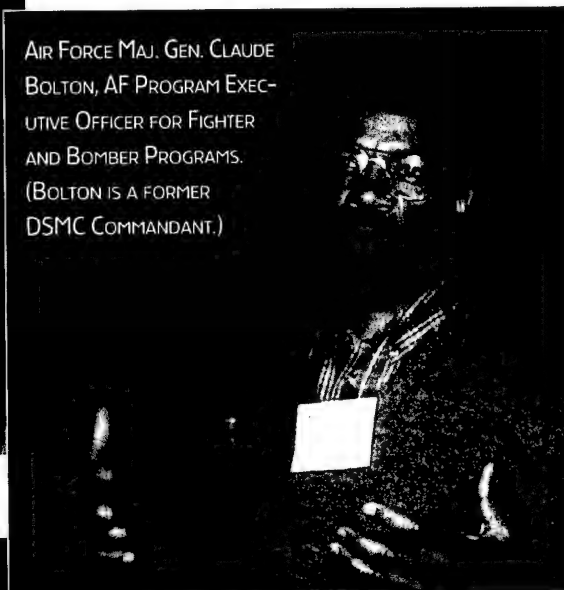
Donna Richbourg, Principal Assistant Deputy Under Secretary of Defense (Acquisition Reform); Navy Rear Adm. Lenn Vincent, DSMC Commandant.
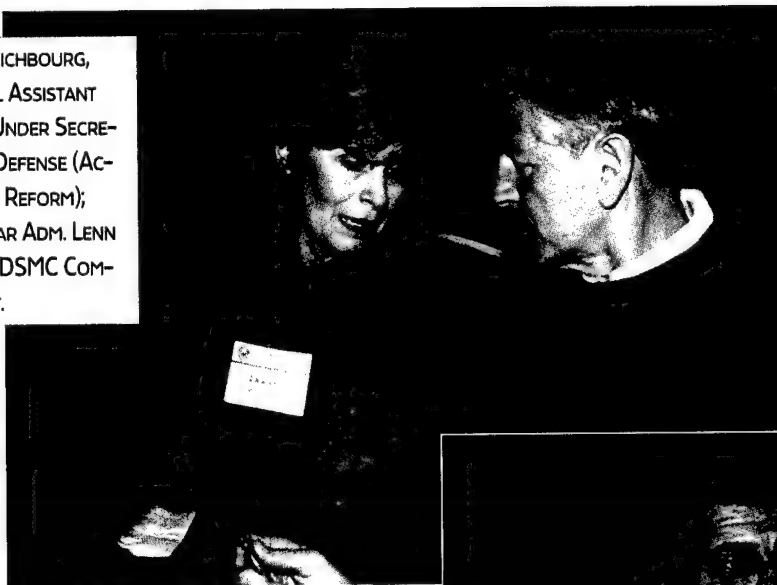
Dr. Spiros Pallas, Principal Deputy to the Director, Strategic & Tactical Systems, OUSD(A&T). Pallas chaired a Breakout Group on "Improving Reliability, Maintainability, and Sustainability Through Continuous Technology Refreshment (CTR)"

Panel on "Industry and Government Views of Price Based Acquisition." From left: William "Bill" Stussie, Deputy Assistant Secretary of the Navy (Air Programs), and Panel Moderator; Karen

PEO/SYSCOM COMMANDERS' WORKSHOP

APRIL 13

Photos by Richard Mattox

COMMANDERS' WORKSHOP

STAN SOLOWAY, DEPUTY UNDER SECRETARY OF DEFENSE (ACQUISITION REFORM) AND DIRECTOR, DEFENSE REFORM. SOLOWAY SERVED AS MODERATOR OF A PANEL ON "SUMMARY OF 912C RESULTS ON PRODUCT SUPPORT AND THE COMMERCIAL BUSINESS ENVIRONMENT."
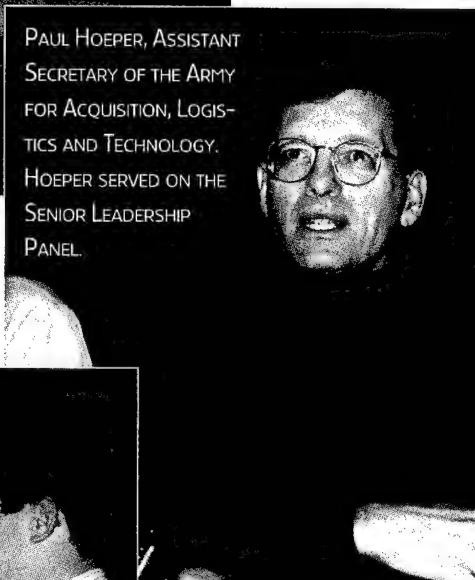
PAUL HOEPER, ASSISTANT SECRETARY OF THE ARMY FOR ACQUISITION, LOGISTICS AND TECHNOLOGY. HOEPER SERVED ON THE SENIOR LEADERSHIP PANEL.

AIR FORCE COL. LARRY "SCOOP" COOPER, SPECIAL ASSISTANT TO THE SERVICE ACQUISITION EXECUTIVE FOR TOTAL OWNERSHIP COST, AND DIRECTOR, SECRETARY OF THE AIR FORCE (ACQUISITION), REDUCTION IN TOTAL OWNERSHIP COST OFFICE. COOPER CO-CHAIRED A BREAKOUT GROUP ON "PM OVERSIGHT OF LIFE CYCLE COST SUPPORT."

WILSON, VICE PRESIDENT, GOVERNMENT FINANCE AND PROCESS EXCELLENCE, ALLIEDSIGNAL, INC.; TERRY MARLOW, VICE PRESIDENT, GOVERNMENT DIVISION, AEROSPACE INDUSTRY ASSOCIATION OF AMERICA, INC.; AIR FORCE MAJ. GEN. TIMOTHY MALISHENKO, COMMANDER, DEFENSE CONTRACT MANAGEMENT COMMAND.
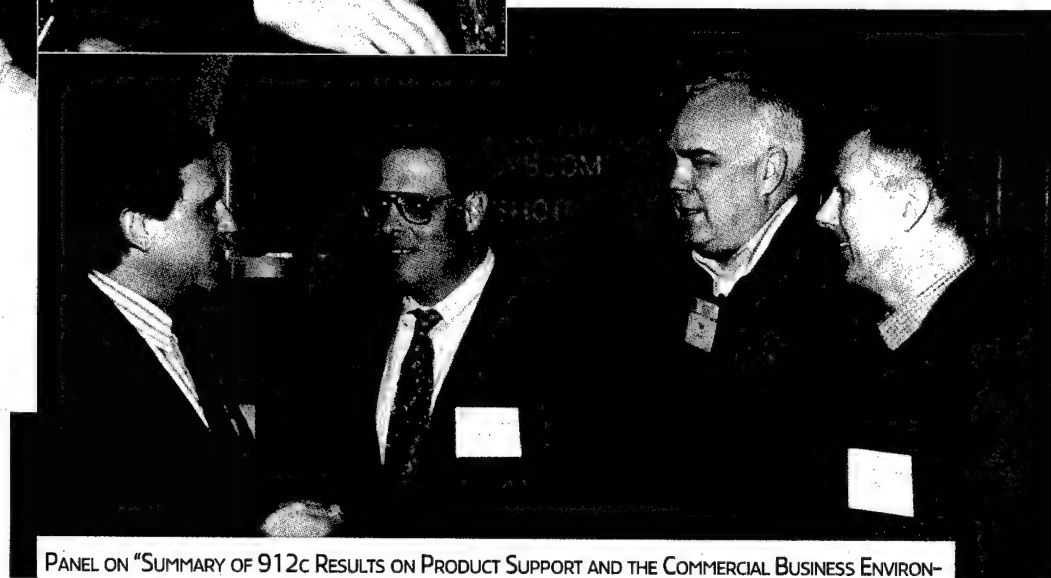
PANEL ON "SUMMARY OF 912C RESULTS ON PRODUCT SUPPORT AND THE COMMERCIAL BUSINESS ENVIRONMENT." FROM LEFT: STAN SOLOWAY, DEPUTY UNDER SECRETARY OF DEFENSE (ACQUISITION REFORM), DIRECTOR, DEFENSE REFORM, AND PANEL MODERATOR; LOUIS KRATZ, DIRECTOR, LOGISTICS SYSTEMS REENGINEERING; WILLIAM "BILL" MOUNTS, DIRECTOR, INTERNATIONAL & COMMERCIAL SYSTEMS ACQUISITION; ROBERT LEACH, OFFICER OF THE DIRECTOR, SYSTEMS ACQUISITION.

—14 1999

SPRING 1999 PEO/SYSCOM

OPEN SYSTEMS JOINT TASK FORCE EXHIBIT
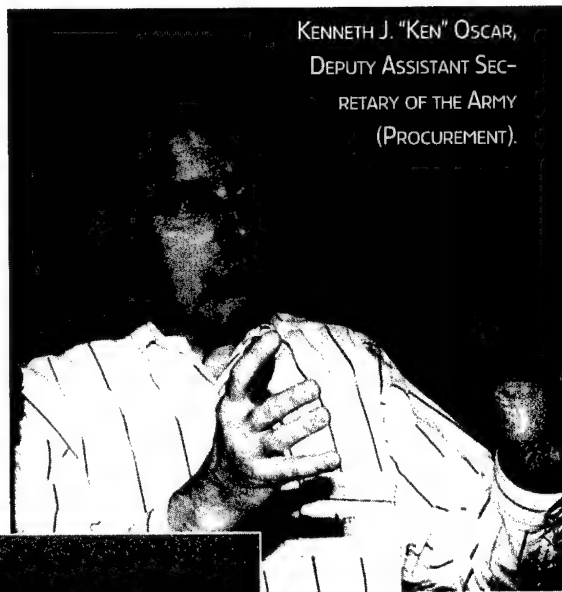
PRINCIPAL DEPUTY UNDER SECRETARY OF DEFENSE (ACQUISITION & TECHNOLOGY), DAVID OLIVER. OLIVER SERVED ON THE SENIOR LEADERSHIP PANEL.
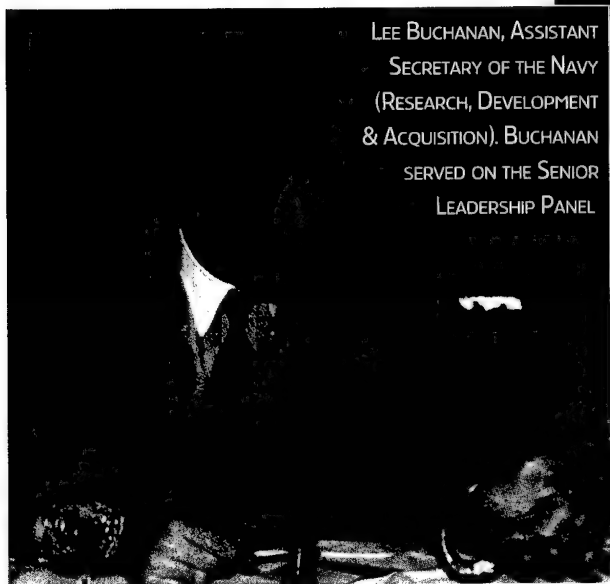
LEE BUCHANAN, ASSISTANT SECRETARY OF THE NAVY (RESEARCH, DEVELOPMENT & ACQUISITION). BUCHANAN SERVED ON THE SENIOR LEADERSHIP PANEL

COMANCHE EXHIBIT

PEO/SYSCOM COMMANDERS' WORKSHOP

APRIL 13

COMMANDERS' WORKSHOP

Navy Rear Adm. Lenn Vincent, DSMC Commandant; Deputy Under Secretary of Defense (Logistics), Roger Kallock.

Maxwell E. Westmorelan, TASC Inc.
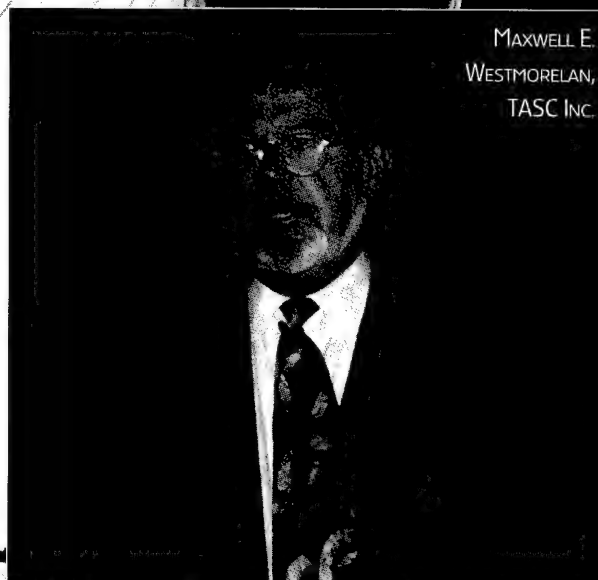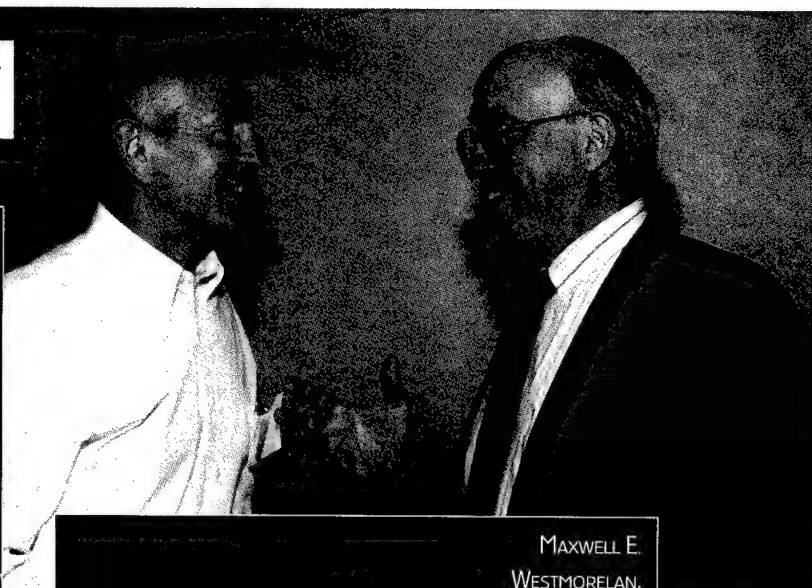
Air Force Lt. Gen. Gregory S. Martin, Principal Deputy, Office of the Assistant Secretary of the Air Force for Acquisition, served on the Senior Leadership Panel.

BOEING

Innovation for higher levels of performance and lower costs ...rship
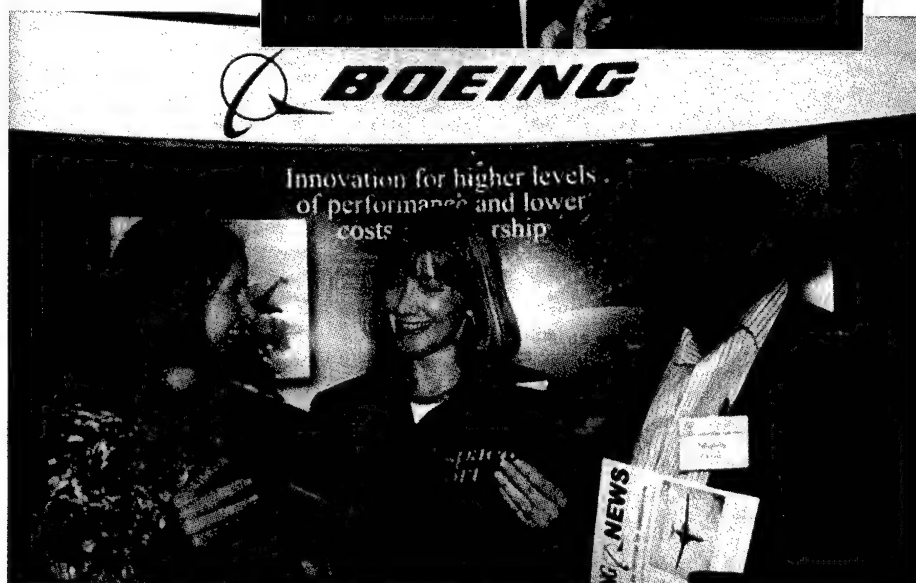
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The Boeing Company Exhibit

place and use these newly acquired tools and techniques because they don't believe their culture will allow them to.

"That's the challenge ... you have, and it's workshops like these that enable all of us to allow our workforce to make the transformation that is so necessary today."

Another transformation taking place is the workshop itself. Based on feedback from the October 1998 PEO/SYSCOM Commanders' Conference, the April event was reoriented from a conference to a workshop focused on a specific topic. Plenary sessions and breakout groups were organized around a number of key follow-up issues from two Section 912c studies, resulting in the theme of "Product Support and Commercial Environment."

Adding New Tools to the Tool Chest

In his keynote speech, Dr. Jacques S. Gansler, Under Secretary of Defense (Acquisition and Technology), explained to the participants that he needs their help in giving program managers the tools they need to succeed in changing the way DoD does business.

Gansler made it clear that although DoD is undergoing a transformation, the current support processes are not broken. "In fact, I think the processes have enabled us to successfully support warfighters and the weapon systems throughout the 20th century." He explained that current problems come from using outdated tools and processes in a changing world.

"The challenge is to change the process and the infrastructure that was very good for the 20th century, but is, I truly think, out of sync with the 21st century." He said, "The current processes — the historic processes if you will — were driven by the need to maintain the high readiness levels of a forward-deployed force to deter what was a dominant threat. They were relatively slow, they were expensive in terms of transportation, they had limited com-

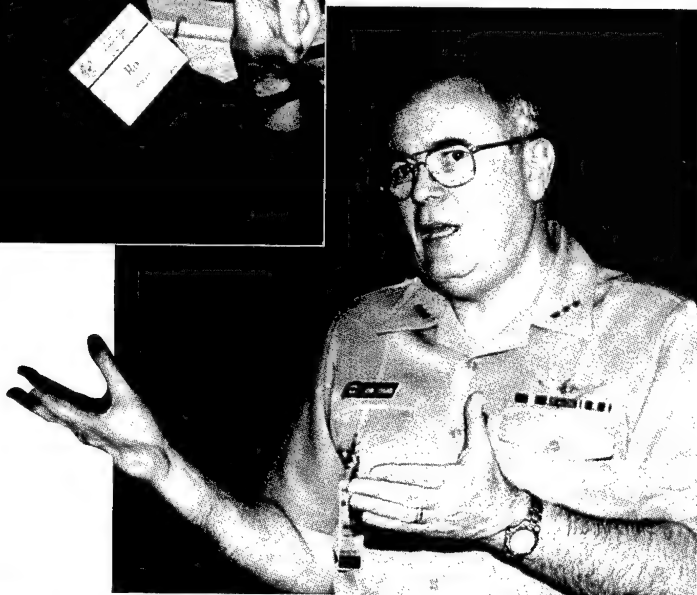> **The basis for this transformation is the belief that DoD could emulate the practices that make commercial businesses successful. Not that the government can or should operate exactly like those businesses, but we have to instill in our workforce some of those cultural values that make our United States economy the envy of the world.**
>
> **—Navy Rear Adm. Lenn Vincent**

munications, and they were basically paper-driven processes.

"Those factors drove us to develop and to nurture a multi-echelon support structure that was optimized to return serviceable reparables to operating forces in a relatively short time. Today that structure is built up to involve 21 maintenance depots, 16 inventory control points, 19 distribution centers, and one of the most striking statistics is that it is supported by over 450 separate non-interoperable logistics information systems. It consumes over $80 billion a year and involves over a million civilian and military personnel."

Gansler pointed out that, "Despite these very high expenditures, we continue to suffer from very long logistics response times — over 30 days — that's when it's on the shelf. And what is really scary about that is that there is a huge variability in the Service response times across the pipeline and in some cases up to two years."

According to Gansler, "The most compelling reason to transform this structure is that it's nonresponsive to the needs of our forces. Unlike the 20th century, the Joint Staff focuses on very different geo-political, economic, and military factors in the 21st century." He added that DoD is going to see more distributed threats that will be defeated only by highly agile forces.

"Essentially we're facing a strategy of force projection versus forward deployment." He explained that DoD needs a system that is relatively inexpensive, but is rapid in terms of transportation responsiveness. In particular, he said, "we need it robust, we need it secure, and we need it on a digital basis." In many cases, he said, opposing forces can get equipment faster than DoD can from the commercial world or from the world arms market.

Gansler said for this reason and many more, DoD must accelerate ongoing Service efforts in the support area. "We have to draw upon the recent successful practices of the commercial sector. We have

to create a cultural environment that encourages, incentivizes, and rewards these transformation efforts."

Gansler said DoD must learn from world-class firms because "they carry 60 percent less inventory; they meet scheduled delivery dates 17 percent more often; they meet customer requested dates 90 percent of the time; and they spend 45 percent less on supply-chain costs." He added that, "These firms are highly responsive, agile, and fully integrated. Exactly the characteristics we need for the 21st century."

Although DoD has set forth some initiatives and is making progress in the area of product support, Gansler pointed out five actions DoD must take for the transformation to be considered successful:

- Rapidly proliferate best commercial practices across our product support processes, with a clear focus on customer service.
- Develop and implement competitive product support strategies for all major weapon systems by 2005.
- Reform our reprocurement practices to exploit rapid reliability enhancements in the commercial sector.
- Provide our program managers with the tools and incentives necessary to achieve visibility and control of life cycle costs.
- Greatly expand the use of prime vendor and virtual prime vendor for those common items that are cost-effective candidates for corporate buys.

Before those actions can succeed, Gansler said there must be a framework. To start building that framework, DoD must foster the development of a competitive supplier base for product support services; reengineer existing financial processes to facilitate integrated product support while providing realistic cost to output information; and modernize DoD's logistics information systems to enable seamless, secure delivery of product support services across government and industry.

After his speech, Gansler fielded a variety of questions from the audience.

Questions ranged from topics such as "What makes you believe that 20-percent reduction is feasible for logistics by 2005?" to "How do you see the program managers exercising visibility and control over O&M [Operations and Maintenance] funds in the future?"

Important Next Steps

"We [DoD] must get our workforce oriented toward a completely different way of doing business," said Stan Soloway, Deputy Under Secretary of Defense (Acquisition Reform). Soloway was the moderator for the first panel, which discussed a summary of 912c Results on Product Support and the Commercial Business Environment. Panelists included Robert Leach, Office of the Director, Systems Acquisition; Louis Kratz, Director, Logistics Systems Reengineering; and William Mounts, Director, International and Commercial Systems Acquisition.

Leach started the panel by explaining that his 912c study team, Program Manager Oversight of Life Cycle Cost, was given their "task from Acquisition Reform. But, we know it's not an OSD task; it's a Service-oriented [and] -led task." He said the Program Manager Oversight of Life Cycle Cost Study (PMOLCS) recommendations will only work if the Services support them.

When given the task of the PMOLCS, Leach said his group prepared a charter that required them to: identify weapon system product support functions, identify responsibility for each support function cost, and identify policy documents authorizing control; determine support functions that PMs should control to reduce life cycle cost; and determine changes needed to enable PMs to control support function costs.

Although his 912c study team has finished a working draft, he said he did not expect to have the final report to Dr. Gansler until the end of April.

The next speaker, Kratz, discussed the status of the Product Support Reengineering study and said his group was asked to focus on four areas:

- Reengineered product support based on best commercial practices.
- Competitively sourced product support.
- Expanded use of modernization through spares.
- Increased use of prime vendors and virtual prime vendors.

He said his group was given two overriding factors: You will focus on implementation, and you must come back with an executable and implementable plan. Kratz said one of the first things his group asked was, "What do we want to get to?" He said they came up with: improve customer service, improve mission-capable rates, reduce product support costs, and provide full asset visibility. The feedback generated from his group's draft has been positive.

The third panelist, Mounts, discussed the status of the Commercial Business Environment study. He said his group decided to take a "clean sheet" approach and "go outside the box." He said they looked to large commercial businesses to see how they did things. Mounts explained how they modeled their "clean sheet" approach off of a Corporate University Strategic Alignment Approach, and decided to shape their report around workforce, cultural change, strategic alignment, and delivery method.

Like a commercial business, he said they adopted the mantra of "better, faster, and cheaper." Under the heading of "better," Mounts said DoD needs to teach commercial business practices to make government a more effective team member with industry; under "faster," he said DoD needs to apply commercial business practices to improve service to "our customers" — the warfighters; and under "cheaper," DoD must improve returns on investments by implementing commercial best practices in military operations.

Ultimately, he said, like industry, DoD needs to take a bottom-line approach to managing its enterprise. Mounts said DoD needs to think of itself "as still having a bottom line similar to what industry or large enterprises in the private sector do,"

but where their "return may be to share-holders, our return, obviously, is to the taxpayer, and ... also to the warfighter."

Other items covered in their presentations included some of the important next steps of continued acquisition and logistics reform, and identification of how DoD will capitalize and expand on best practices — commercial and government — to transform weapon system support processes to meet the operational needs of warfighters in the next millennium. They also emphasized how competition, as a continuous life cycle ingredient, can provide best value support and continuous technology refreshment to increase reliability and lower weapon system costs.

After their presentations, panel members responded to questions from the attendees. Typical questions included:

- Have the comptrollers at OSD and in the Services bought into the idea of Program Manager Life Cycle Oversight (i.e., potential control)?
- Can you discuss the balance between mass CONUS push logistics vs. the just-in-time theater pull system in events such as Kosovo?
- When are we really going to change the defense working capital fund?

Saving DoD Billions

Following the first panel, participants heard James Sinnett, Vice President, Strategic Development, The Boeing Company, speak about "Using Open Systems to Enhance Product Support Reengineering." He explained how "Implementation of an Open Systems approach can save the Department of Defense and the military services literally billions of dollars, provide for technological currency, and provide dramatic improvements in warfighting capability while easing the maintenance and the support burden. Performance Based Business Environment (PBBE) provides many elements of Acquisition Reform that are directly relevant to an open systems approach.

It is important to remember that these two concepts — PBBE and Open Systems — are mutually enabling. Using these con-

> ## **DoD must change the way it does business — that means taking some risks, being out in front to lead the charge, and being a bit counterculture.**
>
> **—James Sinnett**

cepts aggressively will allow us to achieve a significant reduction in total operational/total ownership cost."

He said, PBBE and Open Systems can be pervasive throughout the life cycle, and used as tools to strengthen warfighting capability. However, to capture the benefits, he said, we must all work to remove those impediments, which are our cultural residue from both the "Cold War" and the evolution of acquisition policy and practices over the past 60 years.

Ultimately, Sinnett said, DoD "must change the way it does business — that means taking some risks, being out in front to lead the charge, and being a bit counterculture."

Breakout Groups
After lunch, participants were brought back to campus where they attended one of six different breakout groups.

Co-chaired by Jerry Cothran, Chief Acquisition Logistics, Air Force, and William Kenny, Executive Director, Procurement Management, Defense Logistics Agency, this breakout group provided a forum for discussing and obtaining feedback on the issues surrounding the implementation of weapon system-oriented competitive product support. The session oriented the Product Support community, including PMs, major commands, logistics support organizations, and industry on Section 912 concepts, as embodied in the Implementation Team Report and Competitive Sourcing Guide. Group 1 participants discussed many of the issues surrounding the implementation of weapon system-oriented product support. In particular, they discussed:

- The optimum integration of vertical (weapon system-oriented) and horizontal (commodity-oriented) support arrangements.
- The impediments and enablers facing implementation of new product support arrangements.
- Necessary planning, research, and analysis that should precede product support implementation.
- Building acquisition strategies that facilitate strategic sourcing of product support functions through implementation of intelligent public/private partnerships.
- The unique challenges of transitioning legacy systems support arrangements to the new product support concept.

Co-chaired by Connie Clavier-Bowling, Director of Acquisition Logistics (NAVSEA), and Randy Fowler, Office of the Deputy Under Secretary of Defense (Logistics Materiel and Distribution Management), this breakout group developed a working definition of integrated logistics chains that fit the DoD environment, identified the preferred DoD end state, identified major impediments, and developed required implementation actions. Discussion topics included: trade-offs among alternative end states and paths from present state to end states; a case study of a DoD organization that is imple-

menting and managing integrated logistics chains; PEO and PM roles in implementing and managing integrated logistics chains; areas of greatest potential payoff and most significant risk; and implementation impediments, issues, and required actions.

GROUP 3 — MAINTAINING AND EXPANDING THE PRODUCT SUPPORT COMPETITIVE BASE

Co-chaired by William Mounts, Director, International and Commercial Systems Acquisition and LeAntha Sumpter, Assistant Deputy Under Secretary of Defense (Acquisition Process and Policies), this group explored existing barriers to broaden participation in the DoD product support market and identified actions to overcome those barriers. In addition, they discussed topics ranging from how to leverage budget funds for systems reprocurements to how to exploit lessons learned from the Commercial Operating and Support Savings Initiative to gain access to commercial technology on a broad scale for infusion in DoD reprocurements and spares acquisitions.

GROUP 4 — IMPLEMENTING WIN-WIN PUBLIC/PRIVATE PRODUCT SUPPORT RELATIONSHIPS

Co-chaired by Army Col. Duane Brandt, Director, Army Competitive Sourcing Office and Dr. Richard Stieglitz, President, RGS Associates, Inc., this group developed a common understanding of the partnership concept, and examined DoD and commercial motives and risks applicable to long-term total product support relationships. The group also identified high-payoff opportunities for partnerships with the commercial sector, identified impediments and enablers as well as the pros and cons of proposed new approaches, and determined key implementation actions. Discussion topics ranged from "What is the operational definition of 'partnerships'?" to "How do contract type and award fees influence performance?"

GROUP 5 — PROGRAM MANAGER OVERSIGHT OF LIFE CYCLE COST SUPPORT (PMOLCS)

Co-chaired by Air Force Col. "Scoop" Cooper, Special Assistant for Total Ownership Cost and Robert Leach, Office of the Director, Systems Acquisition, this group discussed the Section 912 PMOLCS management actions including implementation time frames, expected results, enablers and inhibitors, and anticipated positive and negative externalities. Discussion topics ranged from "What are the expected results of implementing the PMOLCS management actions?" to "How long will the test program take, and who will decide if the results warrant widespread implementation within DoD?"

GROUP 6 — IMPROVING RELIABILITY, MAINTAINABILITY, AND SUSTAINABILITY THROUGH CONTINUOUS TECHNOLOGY REFRESHMENT (CTR)

Chaired by Dr. Spiros Pallas, Principal Deputy to the Director, Strategic and Tactical Systems, this group assessed the CTR contribution to reduction of total ownership cost (R-TOC), devised alternative approaches to CTR under traditional and competitive prime vendor support relationships, listed the key impediments, and developed a near-term action roadmap. Discussion topics ranged from the problems caused by dominance of closed architectures in legacy systems to transitioning from "freeze and build" management to CTR.

A New Game

After the breakout sessions, participants proceeded to the officers club for a mixer and a chance to see a variety of exhibits. After touring the exhibits, a town hall meeting on "Transforming Logistics for the 21st Century" was hosted by Roger Kallock, Deputy Under Secretary of Defense (Logistics).

Kallock began by asking the audience what areas they would like him to cover. They made suggestions like: incentives, agility, cycle time, customer service, responsiveness, parts obsolescence, battlefield logistics, and technology impact. He told the audience that the reason he was there was to make sure that the people who are defending the nation are taken care of and have the proper equipment when and where they need it.

He explained that the post-Cold War world requires DoD to change and be flexible. He likened the world today to a "new game" and explained that DoD, consistent with national strategy, is executing a full spectrum of operations. He said that projected threats are diverse and unpredictable and to deter and defeat those projected threats, logistics must support rapid response and precision strikes. "To ensure decisive victory, logistics processes must provide assured, agile sustainment."

He said DoD has a "looming crisis" because it is spending $80 billion a year on logistics, while trying to take care of and maintain old weapon systems. "We have a complex, inefficient, expensive-to-operate system that employs outdated technology." Kallock said DoD needs to move from this situation to a situation where "we have customer confidence — customers being warfighters. Confidence that the supply systems that serve them in their day-to-day business needs – defending this country — are as good or better than the supply systems they use in their ... grocery store or their automotive parts store."

Kallock said DoD must follow the customer-service lead of industry leaders to improve the system. He said he would one day like to see DoD logistics turnaround times measured in hours versus months, weeks, or days. To do this, he said DoD has set logistics leadership goals of having a sharper focus and accelerating ongoing logistics improvement initiatives and galvanizing logistics leadership to act in harmony as mutual stakeholders of a common vision.

After his speech, senior acquisition and logistics leaders joined Kallock in a discussion with the audience on what works and what does not work regarding integration efforts.

The Real Key is Training

Although the town hall meeting did not finish until after 8 p.m., participants were back at DSMC by 8 a.m. the next morning to finish discussions in their breakout groups. Once finished, the groups reunited for a panel on "Industry and

Government Views of Priced Based Acquisition."

The moderator was William Stussie, Deputy Assistant Secretary of the Navy (Air Programs); panelists included: Air Force Maj. Gen. Timothy Malishenko, Commander, Defense Contract Management Command; Terry Marlow, Vice President Government Division, Aerospace Industry Association of America, Inc.; and Karen Wilson, Vice President Government Finance and Process Excellence, Allied Signal, Inc.

"Price Based Acquisition will allow us another tool to do business," Stussie said. He gave a summary of Price Based Acquisition (PBA) by saying, "What we're focusing on is establishing prices without principal reliance on actual or estimated costs, using other things to allow us to establish prices."

Stussie went on to explain that PBA should decrease DoD and industry's infrastructure costs, eliminate the greatest barrier for commercial firms to do business with DoD, and ensure a competitive alternative for every development program.

"The real key to Price Based Acquisition is training. It's training of our workforce on how to use the tools it makes available and training of the contractors' workforce to understand it also," Stussie said.

After Stussie's introduction, the other panelists explained how PBA would help DoD increase its access to commercial technology, reduce infrastructure, and achieve better contract prices through civil-military integration and increased efficiency. They showed how there is room for both price- and cost-based acquisition depending on the circumstances of the contract, and they provided dialogue regarding government and industry's views of the Section 912c study on PBA.

The panel also discussed where DoD is in its application of PBA and addressed feedback on what the Department

> **The real key to Price Based Acquisition is training. It's training of our workforce on how to use the tools it makes available and training of the contractors' workforce to understand it also.**
>
> **—William Stussie**

should be doing. Topics included: the relationship of PBA to the acquisition strategy; the role of market research in awarding a PBA contract; and the implications of PBA source selection, truth in negotiation, financing, value engineering, and termination for convenience.

Responding to Changes in The Work Environment
Once the panel session was over, participants ventured back to the community club for the last sessions of the workshop. Soon after all the participants settled into their seats with lunch, Vicky Farrow, Chief Learning Officer at Lucent Technologies, Inc., spoke about how public and private institutions face a similar challenge: how

to respond to changes in the work environment. She said to be successful and achieve the highest levels of performance, institutions must respond to change by initiating programs that evolve around that specific culture's behavior and ways of conducting business.

"The challenges Lucent faces are similar to those confronting any large organization ... Whether public or private, we are both seeking to respond to changes to our environments by initiating programs that change things – change our culture, our ways of doing things, our behavior." The program used to help initiate change for her company is called Lucent **GROWS** (**G**lobal Growth Mindset, **R**esults Focused, **O**bsessed with Customers and about Competitors, **W**orkplace that is Open, Supportive and Diverse, and **S**peed).

The results of "changing the way they do business" have been very positive. Farrow said that not only have customers noticed a change, but Lucent employees have as well. The change helped make 1998 one of Lucent's most successful years to date, but Farrow said, "We still have further to go."

Observations and Recommendations
Following Farrow's talk, each breakout group reported its findings to the senior leadership panel. These findings were the substance of the workshop, and represented the major issues and recommended solutions involving product support and the commercial business environment.

GROUP 1 – TRANSITIONING TO COMPETITIVELY SOURCED PRODUCT SUPPORT STRATEGIES
Observations
• Industry still sees constraints impeding full participation in product support.
• Must find right horizontal/vertical mix in product support partnerships.
• Product support requires increased information sharing.
• Culture must support rigorous business case analysis.
Recommendations

- More regulatory/legislative flexibility, communication, and policy to facilitate product support relationships.
- Empower product support managers to make vertical/horizontal integration decisions.
- Treat every product support life cycle event as an opportunity to transition legacy systems.

Group 2 – Integrated Logistics Chains (ILC)
Observations
- Services must determine ILC objectives and trade-offs.
- Don't assume one size fits all.
- Ensure no negative impact on warfighter.
Recommendations
- Services establish goals and objectives to enable ILC strategies.
- USD(A&T) sign memorandum requesting Services develop ILC implementation plans to be presented at the next PEO/SYSCOM conference.

Group 3 – Maintaining and Expanding the Product Support Competitive Base
Observations
- Applying acquisition reform to reprocurements is key to affordability.
- Need for long-term partnerships with suppliers.
- Need to improve access to latest commercial technologies.
Recommendations
- Incentivize suppliers by using acquisition strategies that give contractors flexibility to innovate.
- Develop implementation plans to adopt commercial practices.
- Improve government partners' abilities to use government equipment and facilities.
- Streamline reprocurements through performance based solicitations and contracts, and pilot program preferences.

Group 4 – Implementing Win-Win Public/Private Product Support Relationships
Observations
- Both contractors and government want long-term relationships.

- Need performance based specifications and metrics to define acceptable and superior performance.
- Government-contractor teaming is a plus.
- Risks must be offset with rewards.
- Learn from successes and failures.
Recommendations
- Fix fiscal roadblocks to long-term relationships.
- Issue policy, procedures, and templates for government-industry teaming.
- Improve collection and dissemination of lessons learned.

Group 5 – Program Manager Oversight of Life Cycle Cost Support (PMOLCS)
Observations
- Policy and tools needed to provide total visibility into cost by weapon system.
- There are product support functions appropriate for program manager control.
- Savings will take time to realize; should be retained by program/warfighter until validated.
Recommendations
- Create and populate automated cost visibility tool.
- Plan, program, budget O&M in same manner as RDT&E and procurement.
- Apply cost reduction initiatives on case-by-case basis, with six-year test period.

Group 6 – Improving Reliability, Maintainability, and Sustainability Through Continuous Technology Refreshment (CTR)
Observations
- Lack of Contracted Logistics Support incentives in government and industry due to short-term mentality.
- Both acquisition program manager and commodity manager should be equally involved.
- Little effort to balance upgrades with O&S [Operations and Support] cost reductions.
- DoD has no investment policy for Reliability, Maintainability, and Supportability improvement.
Recommendations
- More long-term price and performance based contracts.

- Base program manager control on business case to resource sponsor.
- Program manager should develop integrated cost reduction modernization plans with warfighter input.
- Develop standardized investment process with business case and training.

Change is What Makes The World Go Round
The final senior leadership panel answered questions from the audience and discussed the future of DoD acquisition.

Panelists included David Oliver, Principal Deputy Under Secretary of Defense (Acquisition and Technology); Paul Hoeper, Assistant Secretary of the Army (Acquisition, Logistics, and Technology); Lee Buchanan, Assistant Secretary of the Navy (Research, Development, and Acquisition); Air Force Lt. Gen. Gregory Martin, Principal Deputy Assistant Secretary of the Air Force (Acquisition); Army Maj. Gen. Charles Cannon, Assistant Deputy Chief of Staff for Logistics; Navy Vice Adm. James Amerault, Deputy Chief of Naval Operations (Logistics); Grover Dunn, Assistant Director of Maintenance, Air Force; Marine Maj. Gen. Geoffrey Higginbotham, Deputy Chief of Staff for Installations and Logistics; and Rear Adm. E.R. Chamberlin, Deputy Director, Defense Logistics Agency.

This panel was less formal than the highly structured workshop. Panelists related real-world examples of acquisition reform and provided some comic relief with humorous anecdotes. David Oliver related a true story that happened a few months ago.

He explained how a program manager came to him and was concerned because his program was going to be cancelled. Oliver asked the PM, "Have you talked to PA&E [the Program Analysis and Evaluation Office located in the Pentagon]?" The PM said "Yes, but PA&E wanted to come and do an evaluation. It was classified, so we told them they could only send one person who couldn't take notes and all he could do was read our papers. But, he had to do it inside our vault, which is in Richmond."

> ## We have a complex, inefficient, expensive-to-operate system that employs outdated technology.
>
> **–Roger Kallock**

After explaining the situation, the PM said to Oliver, "We don't know *why* they don't like us." Oliver said he recommended that the PM take the representative from PA&E out to dinner and open up the files and let him take notes. Ultimately, the program did not get cancelled, but Oliver said he found it hard to believe that the PM was on the verge of letting it get cancelled because he was not willing to use the best source of data available to him concerning likely cost (PA&E).

Other topics discussed included: prime vendor initiatives, performance based contracting, where to draw the red line, and Red Team data gathering. The prevailing theme the panelists relayed was that it is vital that DoD change the way it does business. Oliver closed the workshop by thanking the attendees for their participation and thanking the people who worked behind the scenes to make the workshop a success.

The next PEO/ SYSCOM Commanders' Conference is slated for Oct. 19-20 at the Defense Systems Management College main campus, Fort Belvoir, Va.

Editor's Note: Workshop presentations are available at **http://www.acq.osd. mil/dsac/confern.htm** on the DSAC Web site.

New Study Names DoD Business Practice Goals

acques Gansler, Under Secretary of Defense for Acquisition and Technology, has announced the publication of *Into the 21st Century: A Strategy for Affordability.* This document is the Department of Defense's blueprint for adapting to the Department's needs the best world-class business and technical practices in rationalizing infrastructure, restructuring support systems, and reducing cycle times and ownership costs while improving readiness.

Into the 21st Century: A Strategy for Affordability was produced by the Defense Systems Affordability Council (DSAC). The DSAC is the Department's forum for setting and monitoring top-level goals, objectives, and metrics. In this study, the DSAC has enumerated three top-level goals that are strategically interrelated:

- Field high-quality defense products quickly and support them responsively — By reducing the cycle time of DoD processes for acquisition and support, this will produce cost reduction across-the-board, while improving readiness and responsiveness.

- Lower the total ownership cost of defense products — By reducing the investment cost of new systems, this will increase the purchasing power of modernization funding. It will reduce operating and support costs of fielded systems, and will make more resources available for modernization.

- Reduce overhead cost of the acquisition and logistics infrastructure — The efficiencies achieved can be reallocated for modernization or essential support.

For each goal, the strategy articulates the DSAC's enterprise-level objectives and metrics, and the major initiatives that will contribute to achieving those objectives. The strategy also challenges the Department to achieve some targets by 2005 such as cutting logistics response time to five days and lowering logistics support costs by 20 percent.

Editor's Note: This information, published April 9 by the Office of the Assistant Secretary of Defense for Public Affairs, is in the public domain at **http://www.defenselink.mil/news** on the Internet.
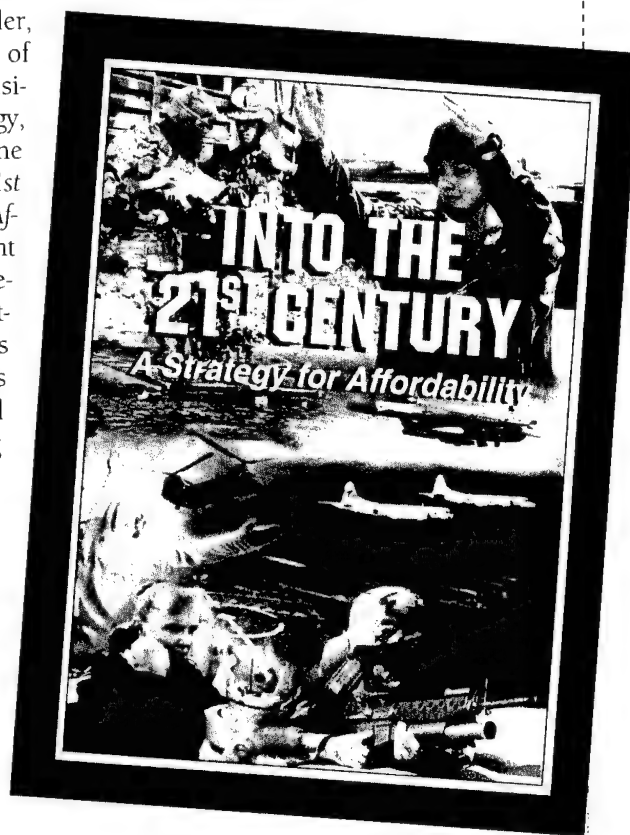
ased on a random survey of 2,500 *Program Manager* magazine subscribers, we have condensed reader comments on our flagship periodical into the following categories:

CALL FOR AUTHORS

Our readers want information on these suggested topics for future issues. Are you a potential author?

- Short takes, nuggets, or "laundry lists" of information on acquisition reform.
- Articles related to acquisition written by DoD/industry employees working on advanced degrees (articles vs. academic papers).
- Disposal and sales articles.
- Non-weapons systems articles, particularly on automation and information management.
- Dialogue on government/industry relationships or interviews with defense acquisition executives and industry chief executive officers.
- Commercial standards and specifications, negotiating in a commercial environment.
- Lessons learned from program managers.
- Examples where program managers lead policy and challenge state-of-the-

art program management techniques and methods.
- Installation and Support services from a program manager's viewpoint. With reduced budgets, more planning and preparation with less money requires better reform tools.
- More articles from industry in general.
- Debate topics in a forum situation: point/counterpoint, industry vs. government, Service vs. Service.

GENERAL SUGGESTIONS

- Add Web site information and E-mail addresses for authors and agencies mentioned in articles.
- Publicize training and job opportunities. (Note: The DSMC Web site at **http://www.dsmc.dsm.mil** has direct links to our 1999 Course Schedule and Catalog. To post a job announcement or training opportunity on the DSMC Web site, send an E-mail requesting approval to **Infomaster@dsmc.dsm.mil.**)
- Less photos of events, more training information.

KUDOS

We received encouraging comments from several readers. Many were similar; some focused on specific features of the mag-

azine, while others addressed the publication as a whole:

- "Surfing the Net is excellent — keep it up!"
- "I widely distribute *Program Manager* magazine to project officers as a training tool."
- "Quality product! Put it on your home page." (Note: It's already out there! Go to **http://www.dsmc.dsm.mil** on the Internet. Overall, the DSMC Home Page receives over 300,000 hits a month.)

RECAP

Many thanks to those who took the time to return the survey, especially those who added constructive comments. If you did not receive a survey and would like to comment on our magazine or recommend a potential author or topic, please send an E-mail to **cjohnson@dsmc.dsm.mil** or call us at (703) 805-2892, DSN 655-2892.

With your help, we hope to make *Program Manager* the publication of choice for those seeking information on trends, policies, events, and current thinking affecting program management and defense systems acquisition.

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ir Force Col. Legand L. Burge Jr., Dean, Academic Programs Division, retired effective June 1. Assigned to the college in June 1998, Burge was the former Vice Commander, Air Force ROTC, Maxwell AFB, Ala.

wen Capozzi, Director, Resource Management, departed the college on March 12 to accept a position of increased responsibility with the Office of the DoD Chancellor for Education and Professional Development. Arriving at the college in August 1994, Capozzi served as the director throughout her DSMC tenure.

athy Pearson is currently the Acting Director, Human Resources and Administration Department, a position she has been filling since November 1998. Formerly the Chief, Civilian Personnel Services Office, Pearson retains that title along with her added responsibilities as Acting Director.

ir Force Col. William W. Selah joined the DSMC staff as Dean, Research, Consulting, and Information Division effective April 30. Selah comes to the college from the Office of the Assistant Secretary of the Air Force (Acquisition), where he was the Chief, Acquisition Management Policy Division, Deputy Assistant Secretary (Management Policy and Program Integration). A 1974 graduate of California State University — Sacramento, he holds a bachelor's degree in Electrical Engineering (with honors) and a master's from the Air Force Institute of Technology in Electrical Engineering (Observables Reduction).

"Operationalizing" the Military Acquisition Community

LT. COL. JOHN "JAZZ" JANNAZO, U.S. AIR FORCE

perations. Acquisition. Operations is defined by the self-proclaimed rugged individualists who populate it as "the real world." As in, "OK folks, sit down, relax, and let me tell you all about the 'real world' ... Yep, out there in the 'real' world things are changing fast. If you are going to survive, you have to be quick on your feet and ready for anything."

Acquisition, on the other hand, is often defined by those who populate it as the "unreal" world. As in, "Man, it was 'unreal' out there today, I thought we would never get out of that briefing ... that guy just went on, and on and on." Two very different worlds, two very different sets of rules, yet both co-exist in one *military* universe.

More to follow, but now that I have your attention, time for a quick, very nonscientific, important poll — and a simple two-question test (stay with me now ... the poll is painless, and the test is easy — take home/open book/cooperation encouraged).

THE POLL
Which of the two "worlds" do *you* call home?

THE TEST
Which definition above would *you* apply to Operations? Which definition would *you* apply to Acquisition?

First, the results of the poll. If you call Operations your work world and are

Jannazo is the system program director, Range Instrumentation Systems Program Office, Air Armament Center, Eglin AFB, Fla. He is a graduate of APMC 99-1, DSMC.

reading this article, chances are you are either: a) attending Acquisition 101 as a requirement for your new staff job working "real world" requirements and this was the only magazine on the reading rack near the exercise bikes ... and you are looking for this article's thesis (patience ... it will be here soon); or b) you are a friend of mine and I offered you money if you would read it and give me some feedback (other than "Hey Jazz, don't give up your day job.")

If you claim Acquisition as your work world and are reading this article, chances are you are: a) naturally inquisitive and really want to expand your horizons; b) have exceptionally good taste in which articles to read while riding the exercise bike at the gym while attending Acquisition 101; or c) hating the article already — just by the title, you figure it was probably written by a silly fighter pilot, and you want to see how often the author went without oxygen.

Two Worlds — Not So Different After All

As for the test, there's a surprise bonus because you hung in there with me so far ... there are *no* wrong answers. *Either* definition can fit the operational *or* the acquisition world. That's right. Things are changing fast no matter *what* branch (Army, Navy, Marines, Air Force) of the Service world you live in — and in no one's world can you fully escape long-winded, way-too-boring briefers. My point? The military operational and acquisition worlds do share many similarities, and they are *not* as different as each would have you think. More importantly, each can benefit in some way by incorporating some of the ways the other goes about its business.

Specifically, this article deals with applying several key concepts that help make the U.S. military operational world work — directly to the military acquisition world. What then is "operationalizing" military acquisition all about — and why is it needed today?

Operationalizing acquisition involves bringing key tenets of operational "frontline" values directly into the program offices of the vast DoD acquisition professional workforce. More specifically, it means, "reengineering" the military focus that has faded against the onslaught of incorporating a myriad of commercial business practices — in the increasingly commercial/business-oriented, but still *military* acquisition world.

The inquisitive reader might ask a few questions here (and for the non-inquisitive reader I will make it easy for you): a) What qualifies you to write on this

subject; and b) How do you propose to bring key aspects of an almost 100-percent military-dominated world, into an acquisition environment that is predominantly civilian/business-oriented? Both fair questions.

From My Perspective, A Dangerous Tide

The first question is easy. I am lucky enough to have had the opportunity to spend 15 of my 19 years in service in the operational world — flying fighters in three major Air Force combat commands (including time in the forgotten war, the big one ... WW Cold War), and of course spending time in the Southwest Asia "sandbox." I have worked just about every job in a fighter wing from teflon lieutenant to squadron commander.

I am also lucky enough to have spent four years in the military acquisition world. First in the F-16 program office as one of the Air Force's early Integrated Product Team leads; then on the Acquisition major command staff working requirements; and most recently as a System Program Director (SPD) at Eglin AFB, Fla., in the newly formed Air Armament Center (AAC).

From that perspective, I have found many key aspects of the operational world, if implemented in the boardrooms of acquisition, which would immediately improve *both* worlds. The warfighter would benefit from acquisition professionals who better understood the military operational environment and needs. All of the Services, to a varying degree, attempt to mix/rotate operational experience with acquisition staff work. This is a very good thing, and we need more of it across the board.

This article goes beyond how and when in their careers we assign *individual* military personnel to acquisition billets. All of the Services have some sort of plan/program (some stronger than others) to ensure the acquisition community has military action officers with some level of appropriate "operational" experience. Rather, this article recommends specific ways to bring an institutional-level operational focus back into

military acquisition organizations, helping to stem the insidious, creeping tide of all-out "business-ization" of our combat support forces. This trend toward a total business focus is a dangerous tide, one that if not reversed will one day soon — if not already — create potentially insurmountable barriers and chasms between the "buyers" and the "users." And a military acquisition community out of touch with the user's operational needs would be a potentially fatal combination for America.

So here goes — a fighter pilot turned acquisition professional's ideas on what can and should be done today to "operationalize" the military acquisition community. And unlike the warnings you see on television, you *can* try this at home.

Step 1 (And It's A Big One) What's in a Name?

Let's start from the top with the basics — the SPD (Air Force) and Program Manager or PM (Navy/Army/Marines). Starting *yesterday,* everyone, all Services should refer to the person at the *top* of the organization chart in the DoD program offices by the same name — and I propose they be referred to as the System Program Office (SPO) or *Program Commanders.* That's right — *Program Commanders.* Make the change to the DoD 5000-series regulation. Sacrilege you say? Commanders only command combat troops you say? I must beg to disagree.

The man who runs the Military Personnel Flight is called commander. The doctor who runs the hospital squadron is called commander. The woman who runs the supply squadron is called commander. The occasional uninformed combat commander may sneer at the "command" moniker of their support brethren, but we all know combat commanders would never even get to the war without such stout fellows as the average, find-them-under-any-rock, logistics squadron commanders. (OK, all you current or former logistics squadron commanders, lighten up, a little humor here).

Everyone in military acquisition should stop referring to the lead individual in the program offices as "the manager" or "the director." It is a term devoid of the essence of leadership. The corner hamburger stand has a manager. The hotel you stayed at during your last temporary duty has a night manager. Playgrounds have directors. Church choirs have directors. None of those professions requires or involves the type of *leadership* the 21st century American military will need to keep the world's peace — or fight and win the nation's wars.

At all levels of military supervision, on the line or in the boardroom, the focus is not/should not be managing; it is not/should not be directing. The focus is, and should be, on *leading* and *leadership.* Most Services already either credit or equate program directors to some appropriate level of command for many operational and administrative duties. In the Air Force, current SPO directors are equated on officer career summaries as squadron commander equivalents, and they have commander responsibilities for making military assignments for those members who work for them. It would not be a huge leap of faith to make the change from manager/director to commander for military programs.

Likewise, the professional woman, who is running a multimillion-dollar, next-generation fighter/ship/tank organization, is not a manager, she is not a director, and she is not a company chief executive officer. Both the SPO director and the professional woman are *commanders.* They lead and command people *first.* And herein lies a key distinction. The folks in the cockpits, ships, tanks, laboratories, depots, and program offices are not motivated by financial profit — they are motivated by the *mission. Missions are led by commanders.* This is a difference the private business and military sectors will *never,* and in fact should never, effectively resolve.

It is time the military acquisition community refocuses, recognizes, and publicizes this simple but vital difference. We are not a commercial business venture. We do not sell our stock; we will never turn a profit. Our bottom line is combat-ready soldiers, sailors, airmen, and Marines. We can apply commercial practices to our daily business, but we are at heart a military *warfighting* support organization. And what better way to accomplish change in emphasis than to change the name at the top of the acquisition organization chart — from Program Manager or Director, to Program Commander.

The highly touted Revolution in Military Affairs (RMA) and its cousin, the Revolution in Business Affairs (RBA) has done an *incredible* job helping the DoD form a clearer vision of what we need to accomplish in the next millennium. The aptly named revolutions have opened doors long closed in the military sector. Both have done much to improve the way we accomplish the mission. And there is still much to be done. I am truly an ardent fan and proponent of many key elements of both.

In some areas of military acquisition, however, the RBA pendulum has simply intruded too far into vital military domains. How we view, what we expect of, and what we call the organization leader in the acquisition community, is one of those domains. Ask yourself one question. Which organization would you rather be a part of: an organization with a manager directing day-to-day activities, or an organization with a leader in charge?

Some commercial aspects of the RBA's role in the RMA are pushing the military acquisition community too far from understanding and relating to their first and foremost core competency — *being warriors ready to fight and win our nation's wars.* Warriors wear battle dress uniforms and flight suits on the front lines — and warriors wear blue/tan/green uniforms, and civilian clothes in the boardrooms and support organizations around the world.

In the acquisition world, too often today we are thinking like businessmen, and not like warfighters. We think first of the "bottom line," and then often as an afterthought, about the actual warfighter. This is caused, in part, by what we choose to call the leaders of our acqui-

sition programs. "Managers and directors" should not and cannot lead and focus the acquisition warriors; commanders must lead them. It is a simple, but vital nuance. And I firmly believe only *leaders* can take our acquisition organizations to new levels of success in the next millennium.

Commanders are the leaders in operational military organizations. Commanders are afforded special privileges, in some cases almost sacred privileges. They are ultimately responsible for their organizations, the products produced, the conduct and well being of their organizations' members, and the training of their personnel. Everything. It is no different in the acquisition program offices. Yes, in program offices there is management going on. We manage the budgets. Yes, there is directing going on. We direct the tests. In operational as well as support squadrons, however, commanders are also *managing* budgets, and *directing* operations. They are first and foremost, however, leaders of their people and mission.

Running a program office, large or small, involves leadership. Leaders in the military are called commanders. To make this large-scale, formal change will without question take serious senior leadership involvement. It will take time, but big changes are possible. It was only a few years ago we had over 30,000 military specifications and standards. *30,000!* Today, thanks to the vision of former Secretary of Defense William Perry, military specifications and standards are nearly extinct in the military acquisition contracts. Ten years ago the Integrated Product Team (IPT) was new, it was feared, it was change, it was hard, and it was different. Today, IPTs are the way we live and work in acquisition. Change is possible.

The many highly qualified, highly dedicated civilians running program offices must also be considered part of this cultural change. They already write military performance reports, attend all levels of professional military education institutions; and deal with assignments and training for their assigned military

"Coach your IPT leaders to be leaders first. Manage when needed, direct as required, but always, in every aspect of your organization, speak, preach, and demonstrate leadership first."

personnel. They are leading their programs just like military commanders lead their organizations. For those civilians at the top of their organization chart, they should also be program office commanders. In fact, the Army already has a highly successful training course run by the Army Staff Management College at Fort Belvoir, Va., designed specifically for its up-and-coming civilian leaders. It would benefit the entire acquisition community to extend and expand this type of formal training to every Service's civilian leadership corps.

I would further propose to apply this nomenclature *all* the way up to the Program Executive Officers (PEO). PEOs would become Program Executive Commanders. For the purely military Uniform Code of Military Justice and other concerns, the duty would roll down to their military deputies or up to their military superiors for civilian-led programs. This would not be a major change; it already works this way today.

In the meantime, if you are an SPD or PM (or their bosses), use words like lead-

ership and command on a daily basis. Try it, right now, for the rest of the day, for the rest of the week (hopefully even longer)! Every time you see or hear the term System Program Director or Program Manager, substitute *Program Commander*. It will grow on you.

If you have hopes of one day running your own program, and do not have a formal changeover when taking control of your organization, grab the stick yourself. From Day 1, get everyone together and let them know — military and civilian — where you are coming from; how you will operate, what your values are, and where you are *leading* your organization — and most important of all, how you plan on supporting warfighters' mission needs.

Coach your IPT leaders to be leaders first. Manage when needed, direct as required, but *always,* in every aspect of your organization, speak, preach, and demonstrate leadership first. If you accomplish this, the managing and directing will take care of itself. It is not easy. The payoff, however, will be enormous.

There is much we can/have learned from the business world. This is fact. And there is still much more to learn. But military acquisition will never fully mirror the commercial/business world. It will always be driven by a different motive — and that motive is not now, and will never be, financial profit. Military acquisition commanders, while they share similar skills with their chief executive officer counterparts, must always be military leaders *first.* The time is right to emphasize this point with one and all, by changing all program office directors and managers to program office commanders — *today!*

Step 2 — Say Good-bye to Matrix-Based Organizations
The next step to operationalizing military acquisition is to get rid of matrix organizations now and forever, whenever, and wherever possible. Everywhere, if humanly possible. Today. They are perhaps the biggest single barrier to greater program office effectiveness. The Marine Corps acquisition community has

already moved in this direction. It can be done!

The operational flying world in the Air Force tried a form of matrixed organizations in many of its wings in the 1970s and 1980s. They did not work. During that period, flying squadron commanders did not "own" their war machines, nor did they "own" the men who worked on them. In the 1990s, the Air Force returned to organic flying squadrons. The front-line flying squadron commander now "owns" everything and everyone he needs to get ready for/go to war. The commander is responsible for the training and rating of crew chiefs, avionics specialists, pilots, engine mechanics, administrative specialists, intelligence officers, financial managers, and life support technicians: one person responsible for all of the above career fields, and chances are he or she has hands-on expertise in only one specific skill area (in this case as a pilot). The same logic should also be applied to acquisition program commanders with their contracting, finance, logistics, or other professionals.

If you currently work in a program office and your organization has the resources to retain your talents full time, then the program office commander should rate you, promote you, be responsible for training you, award you, give you time off — the whole nine yards. The program office commander need not have a flight test background to rate and command a flight test engineer, just as the flying squadron commander need not have ever been a crew chief to rate his stalwarts of the line.

You may argue, but what about the small programs that cannot justify their own full-time acquisition professionals of whatever flavor? If the organization is that small, it should/could be rolled up into/with another organization to get the right synergistic mix. At some point, even the most highly matrixed organizations roll up to a common boss. For a few narrow specialties, or a specific technical skill or engineering area, limited resources may dictate a "home" office. Again, this home office of specialties no

one program can employ full time, could roll up to a logical higher-level center organization, called upon for specific tasks and time periods, as required. But this should be minimal.

What about contracts, you may ask? You do not typically, by policy/regulation, have contracting officers being rated by program managers — at least not without a high-level functional reviewing authority. The theory is program commanders would pressure contracting officers to perhaps violate (I prefer "push the limits of") laws/regulations in the name of mission accomplishment — and if contracting officers did not do as the program commanders who rated them wished, the contracting officers would suffer at appraisal time. If they did as the program commanders directed, they could wind up in jail for breaking the law.

Perhaps contracts could be handled like a flying wing handles some of its special support or maintenance functions. For example, the maintenance squadron, which does most heavy engine repairs, is a separate squadron responsible to the entire wing for its specialty. Since laws and regulations are involved in the contracting arena, contracting is an area that would take serious, open-minded, out-of-the-box dialogue. It would be tough work, but with the right leadership support it could be done "on our watch." Or, as Yogi Berra might have said, "It could be done sometime in our lifetime ... maybe even sooner."

The Pit and the Pendulum
In every era of dramatic change in the American military, from the earliest days when men still wore powdered wigs, a huge, invisible pendulum has always been swinging. When it was time to build up, we built up way too much, started too late, and spent too much, for far too long. And when the time came to build down, we built down way too fast, and *always* way too far. When it was time to go nuclear, we went almost "totally nuclear," forgetting about our tactical needs. The list is extensive. And each time the pendulum was swinging, the rank and file in "the pits" usually could see where

it was heading, but were often unable (or worse, unwilling) to do anything about it.

Today, the pendulum of RBA and RMA is swinging wide and fast. Before it swings too far in the military acquisition community, it is time to take stock, to make some bold changes, to make several course corrections. At every level of acquisition, recent operational experience in the subject area is needed. Operational experience can only come by exposing our young officers to both worlds early in their careers. And this should not be a one-time experience. We must continue to find ways of providing opportunities to keep recent operational experience flowing through the acquisition world.

We have learned much from private industry, but no matter how we label it, the military is not, nor will it ever be, a commercial business. We can use key tenets of the commercial sector, its best practices, but the main metric in the military will never be real profit — it will always be mission success, destroying the enemy, winning wars. The time is right for the modern acquisition community to return to its military roots by adopting several key tenets of its operational brethren. Make program directors and managers into program commanders. Give the program commanders real authority over their organizations by eliminating matrixed functionals. Demand an increase in the cross-flow between the operational and acquisition worlds.

No matter how hard the pundits of acquisition academia may try, there are simply no commercial equivalents to the military's ability to accomplish the destruction of enemy air, radar sites, armor, troops, and ships — and its ability to win wars on behalf of the friends, allies, and citizens of the United States.

The time is right. The environment is right. We can be agents of change. It will take courage — *it can be done.*

Editor's Note: The author may be contacted by E-mail at **jannazo@eglin. af.mil.**

Eleventh Annual International Acquisition/Procurement Seminar – Atlantic

IDEA

June 28 – July 2, 1999

Sponsored by the
International Defense Educational Arrangement (IDEA)

at the
Defense Systems Management College (DSMC)
Fort Belvoir, Virginia

Keynote Address
Honorable Jacques S. Gansler
Under Secretary of Defense for
Acquisition and Technology

Topics

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This seminar on international cooperative acquisition and national acquisition practices is sponsored by the **International Defense Educational Arrangement (IDEA)** between defense acquisition educational institutions in the United States, the United Kingdom, Germany, and France.

The Eleventh Atlantic Seminar is by invitation only. Those desiring an invitation, who have not attended the previous seminar in Paris, France, should submit a Letter of Request on government or business letterhead to **DSMC** by fax. Invitations, confirmations, and joining instructions will be issued after May 1, 1999.

Those eligible to attend are Defense Department/Ministry and defense industry employees from the four **IDEA** nations who are actively engaged in international defense acquisition programs. Other nations may participate by invitation. The last day of the seminar (July 2) will be optional for those interested in the educational aspects of international acquisition.

IMPORTANT NOTICE: While the seminar is unclassified, all foreign nationals must obtain facility clearance for **DSMC**, Fort Belvoir.

For more information, visit the **DSMC** Web site on the Internet, or contact an **IDEA** Team member:

- Prof. Richard Kwatnoski, Director, International Acquisition Courses
- Prof. Don Hood
- Sharon Boyd, Seminar Coordinator

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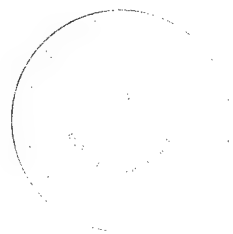
C-17 Program — From the Brink of Cancellation to Baldrige National Quality Award Winner

MAJ. GEN. TIMOTHY MALISHENKO, U.S. AIR FORCE

1998 Malcolm Baldrige National Quality Award for Manufacturing

BOEING AIRLIFT & TANKER PROGRAMS, PRODUCER OF THE C-17, RECENTLY WON THE 1998 MALCOLM BALDRIGE NATIONAL QUALITY AWARD FOR MANUFACTURING. THE MALCOLM BALDRIGE NATIONAL QUALITY AWARD IS THE HIGHEST HONOR BESTOWED TO INDUSTRY IN RECOGNITION OF QUALITY AND WORLD-CLASS BUSINESS PERFORMANCE. BOEING AIRLIFT AND TANKER — AS CLEARLY VISIBLE BY THE SUCCESS OF THE C-17 PROGRAM — IS TRULY DESERVING OF THE AWARD, AND THE DEFENSE CONTRACT MANAGEMENT COMMAND IS PROUD TO STAND WITH ITS C-17 PARTNERS — BOEING AND THE AIR FORCE — AND OFFER SINCERE CONGRATULATIONS.
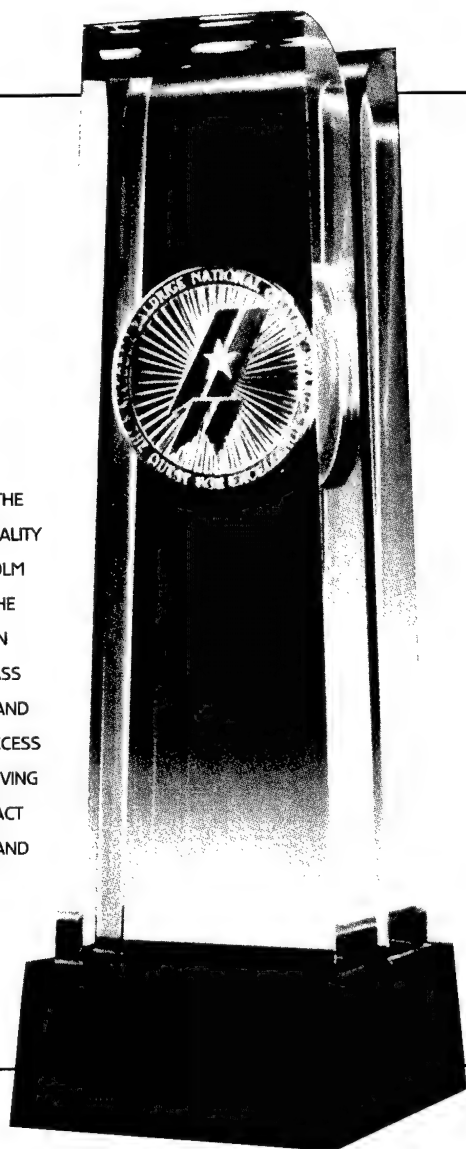
Just six short years ago, the C-17 — the much-needed replacement for an aging C-141 airlift fleet — was on the verge of cancellation. Congressional hearings were commonplace, the Defense Science Board concentrated efforts reviewing the program, and the C-17 "team" players — the Air Force program office, DCMC, and the contractor — were in an all-out, no-holds-barred adversarial relationship. In short, it looked as though the beleaguered aircraft was fast becoming a textbook example of programmatic failure. Today, the C-17 is a heralded success story, a benchmark in process improvement, and a cornerstone in teamwork history.

To help tomorrow's program managers benefit from the C-17 team's "lessons learned," this article highlights some of the successful partnership efforts on the program — from teamwork in everyday processes to joint acquisition strategies to the changing roles of contractor and government personnel in acquisition streamlining.

Everyday Teamwork

The type of teamwork that turned around the C-17 wasn't "special projects" teamwork; that is, the kind one might form to tackle a specific challenge and then disband when the goal is met. Rather, teamwork on the C-17 is "fundamental" teamwork — the partners work together on everything from the "big picture" (e.g., establishing the program vision) to the minute details (e.g.,

Malishenko is the commander, Defense Contract Management Command and the senior procurement executive for the Defense Logistics Agency's Procurement Operations.

drivmatics automation process). "Teamwork was in fact the primary key to turning this program around," asserted Rich Harstad, Chief of Manufacturing and Quality for the C-17 Systems Program Office (SPO). "If the program was to survive, we needed to work together to focus on the critical program goals."

Gene Kluter, Director of Supply Chain Management for Raytheon Company, agreed with Harstad. Kluter was an Air Force colonel and commander of DCMC Boeing (then McDonnell Douglas) Long Beach during the tumultuous days of the C-17. "Initially, the parties weren't aligned on goals and objectives ... We needed to rebaseline the program," explained Kluter. "The government and the contractor got together and identified clear goals that we were all going to work toward ... Everybody then marched to these program goals. So it wasn't as if the government had one set of goals and the contractor another. We had a common shared set of goals, a common set of values, and a supportive culture in which this program was going to operate."

Randy Mizer, Vice President of Total Quality Integration for Boeing Airlift and Tanker Programs, concurred. "Teamwork gave us one shared, common vision of what the C-17 program could be — and what it needed to be — for success ... Once we identified this common vision, we realized we needed to create integrated — meaning multifunctional — product teams."

"We got everybody into a room ... everyone who had anything to do with the C-17: the testers, the people who were going to field the airplane in Charleston, the Program Office, the Pentagon, the DCMC office, the contractor. We must have had 150 people," explained Kluter. "We drew up the program structure built on a number of integrated product teams, and started assigning people to these teams."

Integrated Product Teams

Integrated Product Teams (IPT) — a concept that was in its infancy at the time —

"JUST SIX SHORT YEARS AGO, THE C-17 — THE MUCH-NEEDED REPLACEMENT FOR AN AGING C-141 AIRLIFT FLEET — WAS ON THE VERGE OF CANCELLATION ... TODAY, THE C-17 IS A HERALDED SUCCESS STORY, A BENCHMARK IN PROCESS IMPROVEMENT, AND A CORNERSTONE IN TEAMWORK HISTORY."

introduced a comprehensive approach to solving problems and managing program risk while ensuring all members successfully met their responsibilities (SPO: define requirements; DCMC: assure contract compliance; Boeing: execute contract). IPTs, quite simply, are self-directed, multifunctional teams that effectively help manage risk. With IPTs, the C-17 transitioned from a functional-process focus to a sharp focus on product. For instance, an integrated master program plan and schedule were established that incorporated every significant milestone and schedule. And, perhaps most importantly, with IPTs the C-17 evolved from adversarial, guarded communications to cooperative, open teamwork.

"IPTs brought empowerment down to the lower levels to help resolve issues," said Mizer. "In the past, the first reaction of senior management was, 'I've got a problem. I must fix it.' Now the reaction is, 'We've got a problem. Has this been dealt with in the IPT? Have you talked with your counterparts?'"

Communication is a key ingredient to IPT success: ensuring shared metrics and joint decision making. "IPTs help move things along faster and help communication. Our IPT people know about things the same time the SPO and DCMC do. They all talk to their [government] counterpart at least once a day if not twice a day," said Mizer. Kluter echoed Mizer's IPT assessment, "With IPTs, decisions are made faster and they are better decisions. There is better coordination."

Shared Metrics
At the outset of the teaming arrangement, the partners agreed to a joint set of project and process measurements — or metrics — as well as a shared process for gathering and disseminating data. "We got everyone in agreement so we didn't argue about metrics nor how to get data for metrics. Instead, we now focus on how to improve performance and discipline processes," recalled Mizer.

Baldrige Assessment Tools
Shifting the focus to examining processes in order to improve performance is a key

element of Baldrige management principles. The C-17 team made a decision from the outset to use Baldrige assessment tools to help turn the program around. "I remember the meeting in Don Kozlowski's [then Senior Vice President, Military Transport Aircraft, McDonnell Douglas] office when we first suggested using Baldrige criteria as a roadmap for the program," recalled Air Force Lt. Gen. Ronald Kadish, Commander, Electronic Systems Center. Kadish was the C-17 Program Director from October 1993 to August 1996. "First there was a chuckle. But after we thought it through, we all agreed and said, 'Let's do it!' Baldrige gave us a roadmap to follow."

PBM & PROCAS

That reform came in the form of Process Based Management (PBM) — a concept that was new to the C-17 program. PBM was a universal cultural change for all of the team players. It shifted the focus from inspection/detection to prevention/design, from temporary resolutions to continuous improvements, and from isolated answers to systematic solutions.

At DCMC, we instituted PBM through an approach called Process Oriented Contract Administration Services (PROCAS). On the C-17, Boeing and DCMC signed a formal PROCAS/PBM agreement, which ensured the parties focused on problem-solving processes.

"The major change is rather than arguing over whose data is right ... we've got an agreement ... And even though we keep our own perspective — maintain our fiduciary responsibility — it's not an adversarial relationship," explained Mizer. "They're really partnerships focused at the end point rather than at the median point ... Everybody is focused on getting a task done rather than everybody working toward their own goals individually."
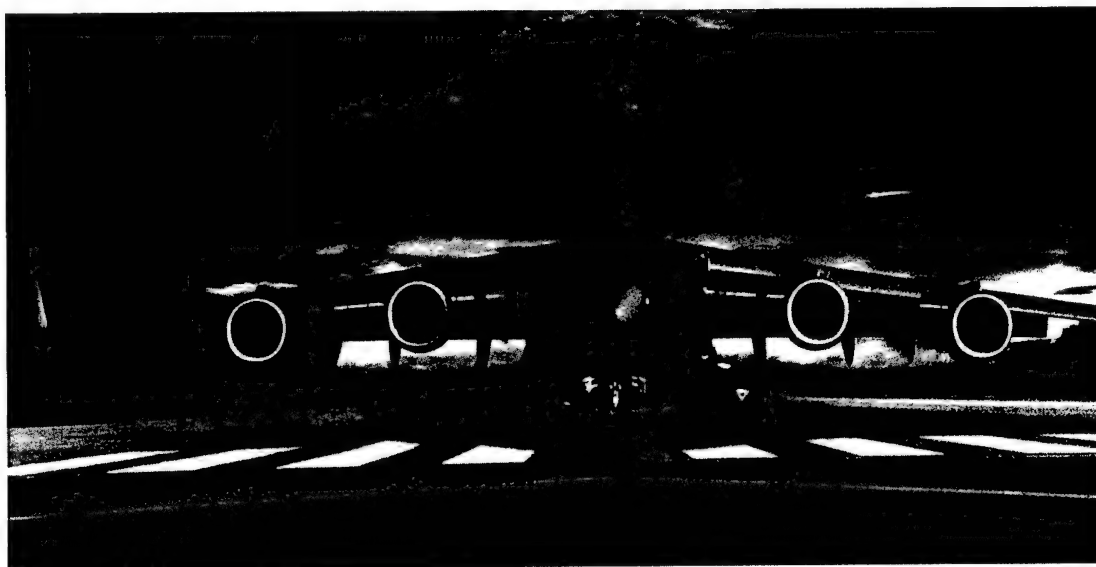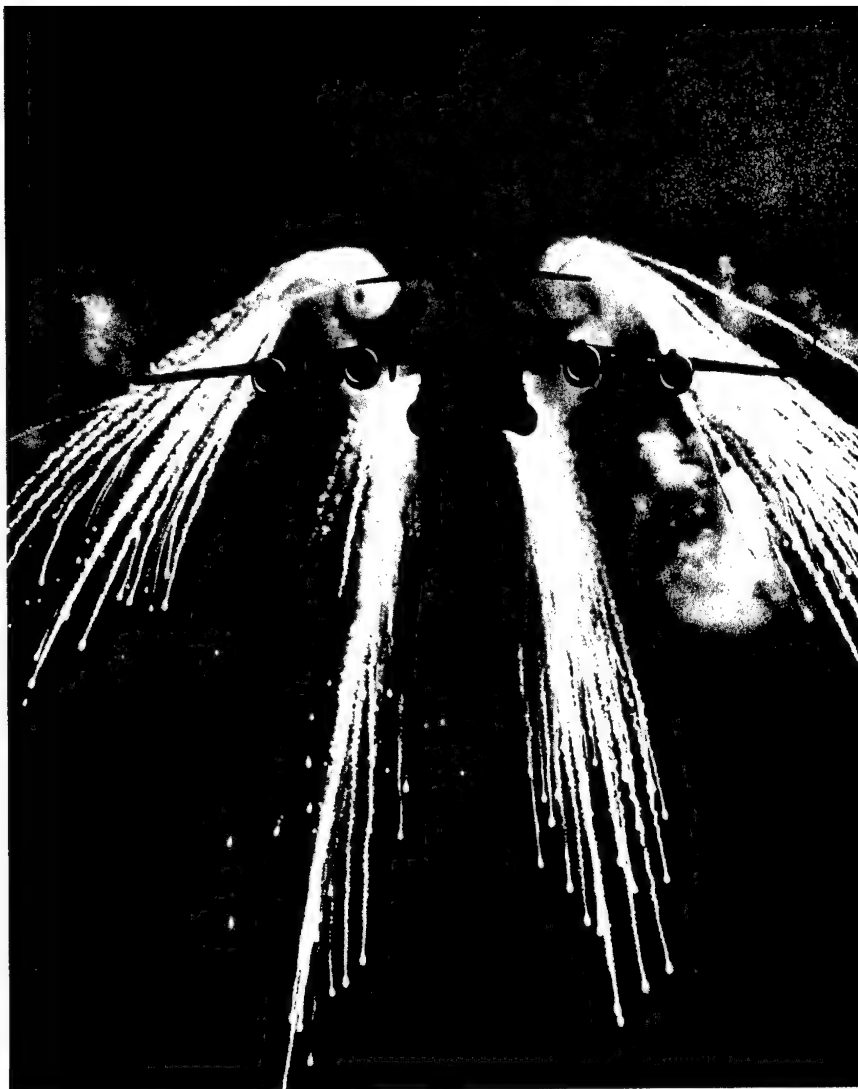
THE C–17 (ABOVE AND OPPOSITE PAGE) IS A HIGH–WING, FOUR–ENGINE, T–TAILED AIRCRAFT WITH A REAR LOADING RAMP. IT IS 174 FEET LONG AND 55.08 FEET HIGH, WITH A WINGSPAN OF 169.75 FEET. MAXIMUM TAKEOFF GROSS WEIGHT IS 585,000 POUNDS. MAXIMUM PAYLOAD IS 170,400 POUNDS. WITH A PAYLOAD OF 160,000 POUNDS, THE C–17 CAN TAKE OFF FROM A 7,600–FOOT AIRFIELD, FLY 2,400 NAUTICAL MILES, AND LAND ON A SMALL, AUSTERE AIRFIELD IN 3,000 FEET OR LESS. THE C–17 CAN BE REFUELED IN FLIGHT.
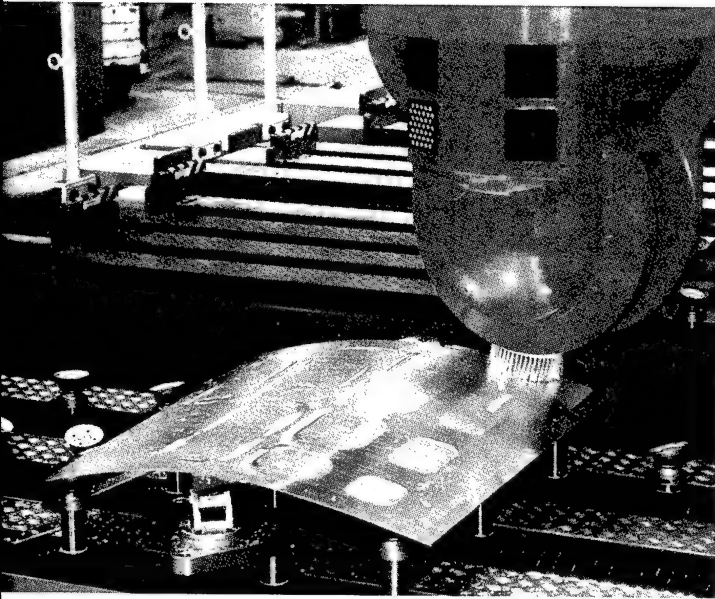
THE FIRST OF SEVERAL GIANT MACHINE TOOLS TO AUTOMATE FUSELAGE SKIN PANEL ASSEMBLY FOR THE U.S. AIR FORCE C-17 GLOBEMASTER III AIRLIFTER HAS BEEN INSTALLED AND IS NOW IN OPERATION AT BOEING FACILITIES. "THIS NEW MACHINE, AND THE OTHERS THAT WILL FOLLOW, WILL ALLOW US TO SATISFY OUR AIR FORCE CUSTOMER WITH THE HIGHEST-QUALITY PRODUCT AT A REDUCED COST, WHILE ALLOWING US TO INCREASE OUR PRODUCTION RATE," SAID BILL GENDRON, DEPUTY C-17 PROGRAM MANAGER AT BOEING.
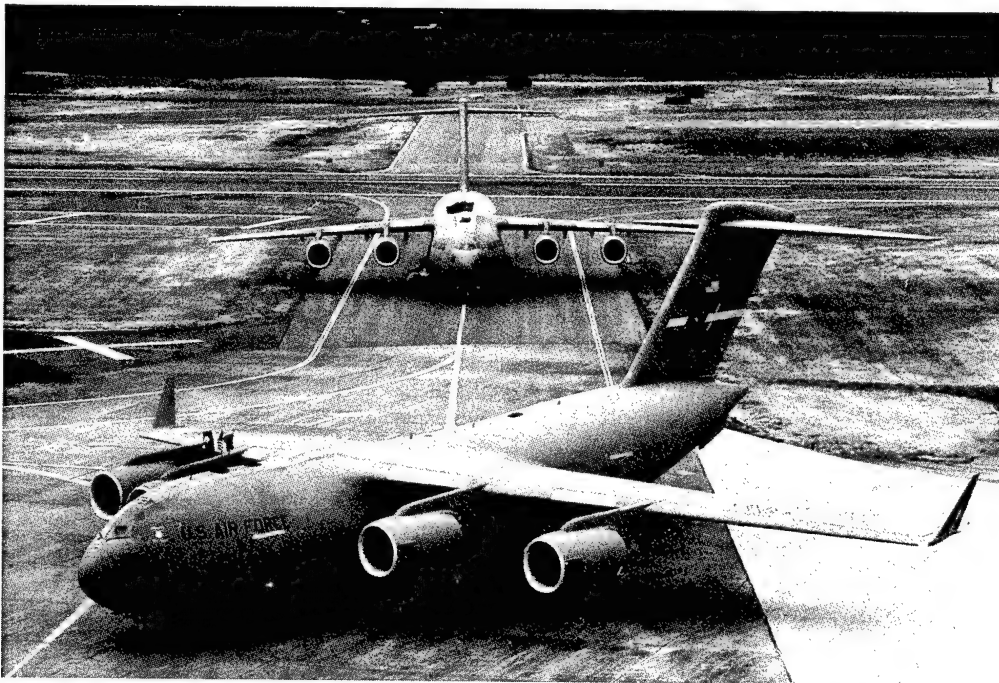
PROCESS OWNERS MANUAL.
As part of the agreement, DCMC worked with Boeing to write a *Process Owners Manual* describing a seven-step procedure and tools for improving processes. The two partners then identified critical processes and designated "process owners," who are Boeing personnel, and "process specialists," who are DCMC personnel. These professionals are empowered to manage processes and establish metrics to provide a balanced view of process health. Of course, the metrics results are shared with all team members throughout the C-17 program. And PRO-CAS/PBM success on the C-17 is measurable. From 1994 to 1998, performance on key quality measures improved 50 percent, cycle time was reduced 80 percent, and efficiency increased 70 percent.

PROCAS proved to be such a success, in fact, that DCMC instituted it as the "way to do business" throughout the 13,000-member command.

Joint Acquisition Strategies

From the outset, all of the C-17 team members agreed to one acquisition strategy goal: a long-term commitment to affordable C-17 prices for a variety of aircraft quantities. To accomplish this goal, the partners drew up a strategy that consisted of several ingredients, including conducting a major should-cost effort, streamlining government requirements, and developing a common cost and pricing methodology.

The goal of the should-cost effort was to identify the lowest executable, most probable cost. The should-cost review of the C-17 was considerably more complex and visible than most should-cost reviews: It was led by a three-star general, Retired Air Force Lt. Gen. Richard Scofield, then-Commander of Aeronautical Systems Center, and over 70 senior government personnel were dedicated to the six-month effort. And, unlike traditional should-cost reviews, this review was conducted jointly with the contractor and the government. "We decided we were going to do a joint should-cost [review] ... We set common goals and objectives of how much money we had to get out of the airplane. By working together, we challenged everything, including how the government does business and how the contractor does business," noted Kluter.

The review ultimately determined a number of factors including the hours required to manufacture the C-17, the number of people required to build the aircraft, the cost of sub-contracted components, the potential application of commercial business practices, and the possibility of using nontraditional government business practices.

This last part of the should-cost review, using nontraditional government practices, allowed the team to streamline government requirements. The team studied the essential performance requirements and determined the safeguards that were necessary; kept key practices, policies, and procedures; and developed lessons learned from past issues. When they were done, they found that some of the military specifications and standards were either unnecessary or required excessive detail, that many were open to conflicting interpretations by government and contractor personnel, and perhaps most damaging, the specifications oftentimes provided a shield for "business as usual."

Advanced Quality System

One of the military specifications the team deleted was Mil-Q-9858A (Quality System). This specification was deemed unnecessary because of the implementation of a Contractor Advanced Quality System (AQS), compatible with commercial quality systems, consisting of three elements: ANSI/ASQC 9001 quality program, an Interface Key Characteristics process, and a Closed-Loop Corrective Action System. To ensure AQS success, the C-17 team — Boeing, DCMC, and the SPO — established a detailed implementation plan. "The three of us agreed that we needed to get out of the old quality framework and implement a system based on ISO [International Standardization Organization]," said Mizer. "That was easy to do because we were well along with our process-based management. ISO is based on process management. Once we agreed to use ISO on our processes, we were well on our way to a relationship of trust."

Joint Cost Model

The teamwork that helped establish ISO 9000 in the contractor's plants, also helped establish a new vehicle for estimating costs and establishing common prices: the Joint Cost Model (JCM). The C-17 JCM was created by a team of all parties inherent to the cost and pricing process: the contractor, DCMC, the SPO, the Defense Contract Audit Agency (DCAA), and suppliers. JCM moved the team from a serial process (that began

with the Request for Proposal; moved to Proposal, Fact-Finding, and Technical Evaluation; and ended with Negotiations) to a joint integrated process that allowed for concurrent work content, fact finding, and cost formulation.

The benefits of JCM include parametric estimating, continuous Forward Pricing Rate Agreements (FPRA), flexibility to change with circumstances, and the concurrence of all team members on the validity of the results. Use of the JCM resulted in a proposal that contained significant reductions (20 percent) from the should-cost baseline, the accomplishment of formal review and negotiations in just weeks (as opposed to months), and the negotiation of FPRAs in just a few days (down from months).

It's a system that worked well ... and continues to work well for all parties. "Since [implementing JCM], we have totally avoided anything resembling classical negotiations with months of fact-finding and so forth," said Harstad. "But it takes a level of trust. You have to have an open sharing of financial information, a joint understanding of where you're heading in the future, what kinds of actions you expect to implement, and what you believe the costs and benefits of those actions to be. Without the kind of trust and shared data that was made possible by our teamwork, I don't believe we could have built the Joint Cost Model."

Changing Roles of Contractor and Government Personnel

One of the continuing benefits of the C-17 teaming arrangement was the move to a process-oriented environment through PROCAS and PBM. This cultural change had three distinct advantages for the C-17: improved customer satisfaction, reduced contractor cost, and reduced cost of government oversight. The C-17 SPO (the customer) no longer had to rely on inspectors for quality and process control (there were at one point 290 company inspectors and 41 DCMC inspectors on the program). With PROCAS, contractor performance improved,

defects were reduced by 76 percent, and mandatory inspections decreased (company inspectors reduced 50 percent; DCMC inspectors reduced 60 percent).

"At the time, it was an 'arm's length' relationship. The government wrote and then checked compliance with the contract," said Kluter. "We decided it was more important to work together toward a common goal and use the contract as a vehicle for reaching that goal ... The idea was to concentrate on those things that were really important."

Another change in the roles of C-17 team members involves the delegation of government source inspection (GSI), a time-intensive process usually delegated to DCMC. The requirement of GSI on contracts is an issue of intense interest in the Department today. In fact, DCMC is leading a team of Service and Agency experts exploring the GSI issue under Department of Defense (DoD) Management Reform Memorandum (MRM) No. 10, Redesigning DoD Source Acceptance Policies and Procedures.

The C-17 program is a leader in this reform, which has already proven successful. Prior to PROCAS, there were 1,257 components requiring GSI on the C-17. After the institution of the teaming agreement, component and vendor performance were tracked allowing for the removal of GSI at minimum performance levels. The result was a reduction of GSI on the C-17 by 61 percent.

Teaming Means Success and Savings

"This [winning the Baldrige Award] could never have been done without the help of the SPO and the DCMC ... Everybody considers it a win."

—Randy Mizer
VP Boeing Airlift and Tanker Programs

The tremendous success of a once-troubled program is undeniable proof that teamwork can turn anything around. But perhaps most importantly, it's proof that when it comes to C-17 teamwork, *the real winners are the American taxpayers.*

Information Technology Improves Sailors' Lives, CNO Says

JO1 CHRIS ALVES, U.S. NAVY

WASHINGTON (NWS) — The Chief of Naval Operations, Adm. Jay L. Johnson, told a conference of communication and electronics experts Jan. 21 that Navy investments in information technology have already paid off for sailors.

"Simply ask sailors who have been on ships with IT-21 capabilities. They will tell you of its dramatic impact on their quality of life," the CNO said, referring to the project designed to improve warfighting capability, reduce fleet operating and support costs, and enhance the quality of life of deployed sailors and Marines. "It has been a major boost to morale and efficiency on long deployments."

Forward-deployed sailors enjoy the benefits of IT-21 in a variety of ways. Aboard *USS Enterprise*, for example, crewmembers have been sending out about 60,000 E-mail messages per day while currently deployed, many of those to their loved ones at home. Some *USS Carl Vinson* sailors and officers are taking graduate-level college courses using video teleconferencing and the Internet while the ship is at sea.

Adm. Johnson spoke to U.S. Naval Institute (USNI) and Armed Forces Communication Electronics Association (AFCEA) members in San Diego, Calif., at their annual western conference. A number of sailors were also in the audience.

In addition to improving the quality of sailors' lives, the CNO said advances in information technology will make sailors more effective in their mission, despite a fleet with fewer ships than in the Cold War era.

"We have spread sustained combat power across the fleet as never before, and the future holds the promise of even greater fleet effectiveness," Adm. Johnson said.

During the question-and-answer session, the CNO was asked how information technology compares with other priorities, such as fleet modernization and improving quality of life for sailors.

"We can't just focus on IT-21 and forget the rest of it," Adm. Johnson responded. "We've got to balance it all. We're making progress, and the trends are in the right direction."

The CNO told those attending the conference that the Navy must continue to keep pace with technology as the fleet moves forward toward "network-centric" warfare using IT-21 technology.

"Looking forward I see a Navy of enhanced effectiveness, greater efficiency, and tremendous reach, yet it will remain a Navy forward-deployed in the requisite numbers to strengthen peace, deepen friendships, and deter aggression," the CNO said.

"The Navy must be forward, modern, and connected. Can we achieve this? Of course we can, and we will."

Editor's Note: This information is in the public domain at **http://www.chinfo.navy.mil/cno-news** on the World Wide Web.

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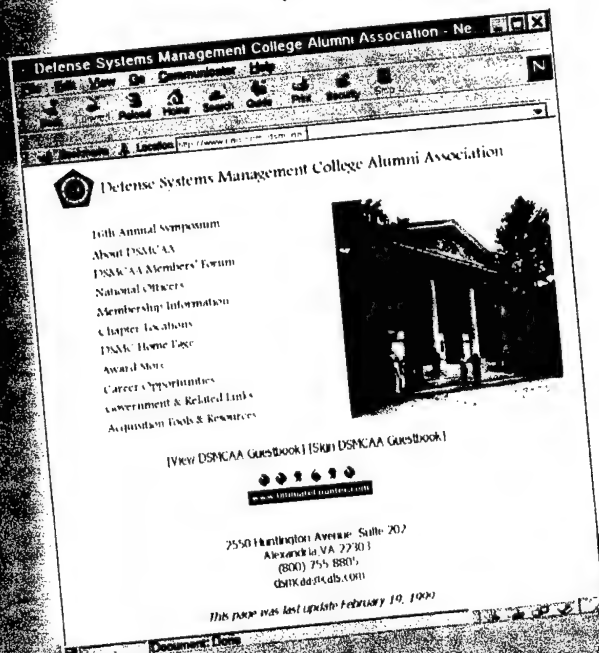
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THE UNDER SECRETARY OF DEFENSE

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WASHINGTON, DC 20301-3010

APR 8   1999

MEMORANDUM FOR: SEE DISTRIBUTION

SUBJECT: Reinstatement of ADS 97-03-GD, Department of Defense
"Acquisition Career Management Mandatory Course
Fulfillment Program and Competency Standards"

Pursuant to Section 8147 of Public Law 105-262 (FY 1999
Defense Appropriations Act) of October 17, 1998, I am reinstating
ADS 97-03-GD (January 1997), "Acquisition Career Management
Mandatory Course Fulfillment and Competency Standards," as ADS 99-
03-GD, effective immediately. Procedures to request, review, and
approve fulfillment actions are attached. ADS 99-03-GD includes
the policy, the procedures, DD Form 2518, and the course
competencies. This information will be available on the Defense
Acquisition University world-wide-website (http://www.acq.osd.mil)
and will not be published as a document.

The fulfillment program enables members of the acquisition
workforce to receive credit for mandatory Defense Acquisition
University (DAU) courses for which they are able to demonstrate
competency through experience, education, and/or alternative
training. Course participation, however, remains the preferred
method.

The Director, Acquisition Education, Training and Career
Development (AET&CD) within the Office of the Secretary of Defense
is delegated responsibility for the integrity of the fulfillment
program. The Directors, Acquisition Career Management, will
periodically review selected approved fulfillment packages. DAU
will update changes in course competencies and, also, conduct
periodic reviews of the program to assess its net benefit from an
academic perspective. The Heads of the DoD Components may issue
instructions necessary to implement this program.

J. S. Gansler

Attachment

NDIA 15th Annual T&E Conference Draws Large, Diverse Crowd

COLLIE J. JOHNSON

etired Air Force Gen. Larry D. Welch has a reputation for getting things done. In fact, the word around Washington is that if you don't want the study or program to succeed, don't ask Welch to lead it. His reputation preceding him, Welch, who is the current Director of the Institute for Defense Analyses and former Air Force Chief of Staff, set the tone as keynote speaker for the 15th Annual National Defense Industrial Association (NDIA) Test and Evaluation National Conference and Exhibition by giving the conferees a good dose of what he's known for: plain talk, common sense, and a keen grasp of what it takes to cut to the issues.

"Our hardest test and evaluation challenge," he told the conferees, "is not only how do we build systems/networks that we know where the information is flowing, but that we have assurance in the integrity of the information and we can control access to the information — that we can do all that without interfering with the timely availability of information to those people who need it."

On that note, hundreds of test and evaluation senior leaders and practitioners stayed to hear more at the four-day conference held in Las Vegas, Nev., March 8-11. And during that four days they not

only heard Welch speak on "Forging Information into Battlespace Decisions" and the importance of achieving Information Superiority, but also heard a large cross-spectrum of information and perspectives from DoD and industry leaders on three related topics: Test and Evaluation of Defense Information Systems, Information Warfare (IW), and Information Assurance (IA).

Why NDIA's Emphasis on Information?

Recent headlines warned us of the destructive nature of the Melissa computer virus. Since August 1998, Y2K has earned a spot on the nightly news. Telephone outages recently rendered the Pentagon "speechless" for several hours.

The business of the 15th Annual NDIA Conference was to talk about information — a word that used to be fairly common, but in recent years has taken on a vocabulary of its own.

Is the United States under cyber attack? Are hackers a serious threat to our nation's defense and industrial information systems? Are our information systems being penetrated? Are these intrusions being detected? To what extent? Have there been serious attacks against the information systems that support our nation's critical infrastructures? What role does test and evaluation have in the IW/IA arena? And finally, if our nation is under cyber attack, what can we do about it?

FROM LEFT: PHILIP COYLE, DIRECTOR, OPERATIONAL TEST & EVALUATION (DOT&E), OSD, WELCOMES RETIRED AIR FORCE GEN. LARRY WELCH, PRESIDENT, INSTITUTE FOR DEFENSE ANALYSES, TO THE 15TH ANNUAL T&E NATIONAL CONFERENCE & EXHIBITION, LAS VEGAS, NEV., MARCH 8-11. COYLE WAS THE 1999 CONFERENCE CHAIRMAN. WELCH, A FORMER AIR FORCE CHIEF OF STAFF, SERVED AS KEYNOTE SPEAKER.

JAMES F. "JIM" O'BRYON, DEPUTY DIRECTOR, OPERATIONAL TEST & EVALUATION/LIVE FIRE TESTING, AND CHAIRMAN, NDIA TEST & EVALUATION DIVISION, SERVED AS CONFERENCE MODERATOR. "WE NEED TO CHANGE THE WAY WE'RE DOING BUSINESS IN IA AND IW," O'BRYON TOLD THE CONFEREES. "I DON'T WANT TO BE A VICTIM OF THE FUTURE — I WANT TO CHANGE IT ... AND IT'S GOING TO TAKE WORK."

Johnson is managing editor, Program Manager *magazine, Visual Arts and Press Department, Division of College Administration and Services, DSMC.*

These questions and issues were the backdrop of the 1999 conference. In addition to Welch as keynote speaker, this year's conference planners brought out the T&E community "movers and shakers" to grapple with the issues, starting with Philip E. Coyle III, the current Director of Operational Test and Evaluation (DOT&E), OSD, and Conference Chairman. Victor Sheymov, believed to be the highest ranking KGB officer ever to defect from the Soviet Union, grabbed everyone's attention as he related his experiences as the KGB's officer in charge of Soviet Cypher Communications abroad, and Jack Krings, a former Director of Operational Test and Evaluation, rounded out a rostrum of speakers that represented the best of the DoD-industry T&E community.

Emphasis Changing

The Revolution in Military Affairs is changing the emphasis in military operations to interoperability, systems-of-systems, and information systems. Systems can no longer be tested only in a stand-alone configuration, but must be tested with multiple other systems, increasing the complexity of the tests and straining the capabilities of existing resources. Coyle acknowledges that the state of Test and Evaluation (T&E) capability in DoD has continued to decline.

Achieving DoD's Joint Vision 2010 goals, Coyle says, relies in part on the two unifying concepts of information superiority and full-spectrum dominance. In his 1998 Annual Report to the Congress, he unequivocally stated that "Information superiority and information assurance will become an important part of operational testing programs."

To do this, Coyle told the conferees that DoD and industry must join forces to ensure that all elements of the U.S. Joint Forces are able to: (1) work together smoothly; (2) work well as a system-of-systems; and (3) have confidence that the information base can be used with assurance.

Keynote Speaker

What is Information Superiority? Welch started his presentation by telling the conferees what it *is not*: "We have become accustomed to referring to a thing we call information superiority, and counting on this thing we call information superiority to be a basic underpinning of a great many of the 21st century concepts that we all find exciting and effectively find vital and essential.

"I would suggest to you that if we define information superiority as knowing more, and having more information flowing into us, having better sensors,

> We are all 'information junkies' — our kids absorb and integrate more information every day than adults in almost any other culture. So it's this business, it's this ability to translate information into combat decisions that's the real issue.

Victor Sheymov, former KGB officer responsible for security of the Soviet Union's KGB Cypher Communications abroad during the 1970s, defected to the United States in 1980 for ideological reasons. Since then, he has served as an NSA contractor, specializing in computer communications security. He is also author of the book, Tower of Secrets, *published through the Naval Institute Press. Sheymov was the featured guest speaker at the NDIA 15th Annual T&E National Conference and Exhibition, March 8-11.*

ictor Sheymov doesn't have a problem holding the attention of his audience. Conferees sat riveted as he related his background as a former KGB officer in the Soviet Union prior to the end of the Cold War. Defecting to the United States in 1980, he had a story to tell, and it is a fascinating one. As the KGB officer responsible for security of KGB Cypher Communications abroad during the 1970s, Sheymov's experiences and background were particularly related to the foremost topics of the NDIA 15th Annual Test and Evaluation Conference: *Information Warfare* and *Information Assurance.*

"What is happening is that with expanding technology, we simultaneously open up our vulnerabilities," Sheymov told the conferees. "Inadvertently, we give our opposition (whatever that is) a chance to attack us in a way which would have been unavailable if we didn't develop technology to that extent." He spoke of the four major areas of cyber security from his perspective:

Sheymov insisted that firewall technology just doesn't work. And our current strategy of putting patches on firewalls is becoming an exceedingly expensive proposition. "We have to start developing the new technology as soon as we can," he said, "because I don't know how long we can go down that spiral, spending huge amounts of money on patching firewalls, only to have hackers spend two days finding a way to penetrate them."

"I think we're wide open, and I think this is probably the most underestimated danger now ... we have to develop, again, something principally new [barriers], worthy of the new technology we are handling in terms of computers." Sheymov advised the conferees that it would be easier to put effort into future development of the protective technology, rather than trying to figure out exactly what is going to happen (and he warned them that it would be something bad — of that they could be pretty sure).

Keyboard access as it relates to computer security is actually in a little bit better state than the first two. However, he added one caveat to that assessment by saying, "I think it's in a pretty good state in the high-security environment. I don't think we have too many worries about that. However, if we look into a medium- or low-security environment, it is not in very good shape."

This is an area Sheymov believes has not received nearly enough attention. What happens, he questioned, if our computer falls into the enemy's hands, suppose on the battlefield. That situation, he said, was a classic example of how our strengths can create vulnerabilities through development of technology. "I think (and I'm just shooting from the hip here), what I see as an opening in this particular area, is to take advantage of the near future technological developments, such as distribution of information. Instead of destroying the computer which falls into the enemy's hands, how about feeding false information to the enemy through the computer if we could develop an individualized capability of feeding information into computers."

Concluding his remarks, Sheymov said that his intention was not to paint an entirely grim picture. "We're at the plateau — the juncture if you will — where we have to make a few very hard decisions and think very hard before we make them, because mistakes at this stage could be extremely costly if we don't think hard enough and well enough about what to do."

"Superlative... A towering book, fascinating and hair-raising ...far more exciting than the most exciting accomplished fiction of the spy genre." —Associated Press

having the ability to move more information to more places, then we will not be able to sustain information superiority."

Information superiority, according to Welch, "is our nation's ability to translate information into combat decisions," a subject he acknowledges is enormously difficult to test and assess, but a subject that is vitally important.

Although Welch put before the conferees some hard truths, he also held out reason for optimism in the midst of the most critical T&E challenges this nation has ever faced.

Asymmetric Advantages

Citing our "asymmetric advantages," Welch said that this nation enjoys an enduring asymmetric advantage in terms of our ability to translate data into information into knowledge into understanding into combat decisions.

Calling it a cultural advantage, he says that "We are all 'information junkies' — our kids absorb and integrate more information every day than adults in almost any other culture. So it's this business, it's this ability to translate information into combat decisions that's the real issue."

Today's defense environment, according to Welch, is characterized by absolutely relentless demand for a pace of transformation of the force in order to make this force capable of meeting the full panoply of 21st century needs for defense forces. Simultaneously, we [DoD] are facing an equally relentless demand for a perfect performance in the things we demand of the forces today, every day, all over the world.

In a nutshell, Welch contends that we are demanding that we transform our national military capabilities in totally new directions to meet a panoply of conditions that we have not experienced before, while maintaining near-perfect performance and currency. He characterizes that as "trying to change your shirt without taking off your jacket." We have to do this transformation with "no breathing space," he said, "and that's what's difficult. We've never been asked to do that before."

Asymmetric Threats

Welch spoke at length on asymmetric threats, which he defined as the impact from the velocity and scope of the availability of military capabilities and military information in the world's arms bazaars, and "all these other things going on that make it possible for adversaries to buy for millions what required West-

ern investment of billions." But here again, he delivered some good news along with the bad.

"Asymmetric threats are a fact of life and asymmetric threats are important, but I submit to you that there are also asymmetric advantages," Welch told the conferees. He went on to say that the United States "enjoys asymmetric advantages, and it's important as we [DoD] go through this period of transformation that we exploit these asymmetric advantages, that we protect these asymmetric advantages, and that we make these asymmetric advantages that which drives the outcome of the battlespace, whether that battlespace be an offshooting war, or whether it be peacekeeping, or whether it be humanitarian, or whether it be some other kind of operation."

Drawing upon U.S. combat experiences during Vietnam and Desert Storm, Welch named five asymmetric advantages that he believed were particularly relevant to the subject of the conference:

PRECISION ATTACK
During the air campaign in Vietnam, because of the very low lethality of the individual systems and the conditions under which U.S. troops operated, it was never possible to mass the lethality that would destroy the enemy's infrastruc-
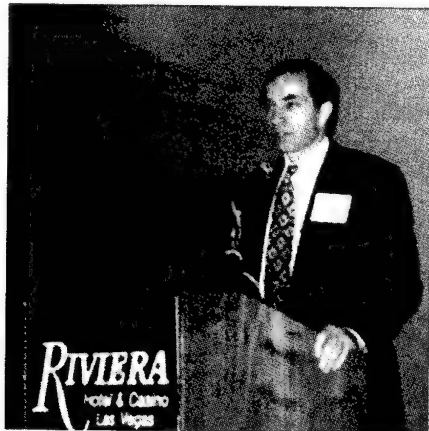
DR. MARVIN J. LANGSTON, DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR CIO POLICY AND IMPLEMENTATION, DEPUTY CHIEF INFORMATION OFFICER, OSD, PRESENTED A NATIONAL SECURITY PERSPECTIVE FOCUSED ON THE ONGOING, AND LARGELY UNRECOGNIZED CYBER WAR.
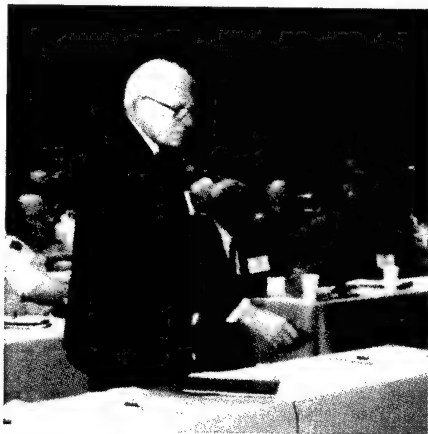
WALT HOLLIS, DEPUTY UNDER SECRETARY OF THE ARMY (OPERATIONS RESEARCH), SPOKE ON COMMON FLAWS IN INFORMATION SYSTEMS DISCOVERED IN OPERATIONAL TESTING.

WALT LABERGE, SENIOR RESEARCH SCIENTIST, UNIVERSITY OF TEXAS AT AUSTIN, PRESENTED A "NEW CONCEPT FOR HELPING INFORMATION-BASED PROGRAMS PASS OT&E."

ture faster than they could repair it. Contrast that with Desert Storm. In Desert Storm a single fighter aircraft, or a single 120mm single round, or a single TOW missile from a Bradley could destroy, on a single mission, a militarily significant target.

Around-the-Clock High-Intensity Operations

Part of the reason why U.S. troops were unable to mass this kind of lethality for these low-lethality individual systems in Vietnam was because the enemy "owned the night." U.S. troops could not operate effectively around-the-clock; consequently, night was the time for the adversary to regroup, reform, and then prepare for the next day's combat. Contrast that with our fighter forces and our armored forces in Desert Storm — for those forces, night was the time of maximum advantage because of the ability to conduct precision attacks around-the-clock. Because of that ability, U.S. troops were able to maintain a pace of operations that simply overwhelmed what they thought was a fairly formidable enemy.

Superb Combat Readiness Training

During Vietnam, Welch said that we sent soldiers, sailors, airmen, and Marines into combat in Vietnam that today would not be considered qualified to participate in a training exercise at the National Training Center. An example he gave contrasted the quality of training during Vietnam vs. the quality of training during Desert Storm.

During Vietnam, the conventional wisdom for a fighter or tactical aircrew in Vietnam was that if they survived the first 10 sorties, there was a good chance that they might become an effective combat air group. Contrast that with Desert Storm, where we expected Army, Air Force, Navy, and Marine aircrews to be totally effective on the first combat mission of their lives, at night, in the face of defenses of an order of magnitude more formidable than anything U.S. troops faced in Vietnam. "They met those expectations," said Welch. "They met those expectations because of the quality of training and because of the quality of people."

Information Superiority

The essence of command in the past has been, "How do you mass forces at the right place at the right time?" Welch maintained that most of us spend a significant part of our professional life learning how to do that and building the capabilities to do that, that is, to mass the right force at the right place at the right time. That takes good information, Welch said, and in many cases, the United States was totally unsuccessful in Vietnam. With Desert Storm came information superiority, and U.S. troops always knew more about what the opponent was doing than the opponent knew about what they were doing. In a very short time, the opponent was totally blind and had no way of stopping what U.S. troops were doing.

High-Quality People of All Ranks

Commenting on the high quality of our people, Welch said it was best expressed by the Soviets. When a high ranking Soviet Marshall (who was the counterpart to our Chairman of the Joint Chiefs of Staff) came over here just before the Soviet Union landed on the dustbin of history, he spent 10 days being escorted around the United States by the Chairman of the Joint Chiefs and other members of the Joint Chiefs, meeting, talking to, observing U.S. soldiers, sailors, air-

men, and Marines working on a daily basis.

After he completed that experience he confided in his U.S. counterpart that he was not surprised by the quality of our equipment — he had understood that. He was not surprised by the quality of our officers — he had understood that. He was greatly surprised by the quality of our enlisted force, and more importantly, he was absolutely astounded by our confidence in, and our confidence from, our enlisted force; that is, in the relationship and the trust and confidence between all the ranks. On the way to New York City to catch his airplane back to Moscow, looking down he finally admitted, "I guess that probably comes from growing up in a democracy."

Our Hardest Challenge

Naming our hardest test and evaluation challenge, Welch said that it is not only how do we build systems/networks that we know where the information is flowing, but that we have assurance in the integrity of the information, and we can control access to the information, and that we can do all that without interfering with the timely availability of information to those people who need it.

"This asymmetric advantage of quality and people that we can count on to lever-
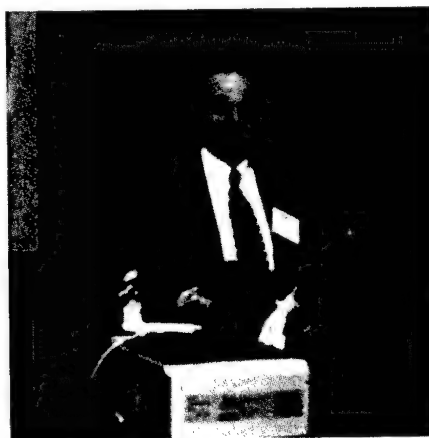
HANK KLUEPFEL, SAIC, GAVE AN INDUSTRY PERSPECTIVE ON COUNTERING THE GROWING PROBLEM OF EXPLOITATION OF THE UNTRUSTWORTHINESS OF INFORMATION SYSTEMS.
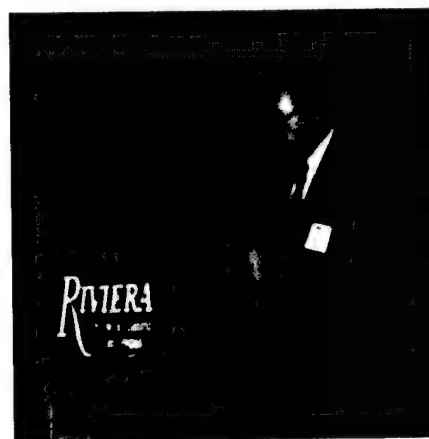
PHILIP LACOMBE, VICE PRESIDENT, POLICY & COMMUNICATIONS, THE VERIDIAN CORPORATION, SPOKE ON THE RESULTS OF THE PRESIDENTIAL COMMISSION ON CRITICAL INFRASTRUCTURE PROTECTION (PCCIP).

age the capabilities we provide in that way," he told the conferees, "makes it in order of magnitude more important that we feed that system and exploit that system with the right kind of information that is readily translatable to knowledge and understanding and decisions."

Warning — Information Overload

Information overload was another area that Welch said some people mistakenly equate with information superiority. "I have seen it reported that in the first 24 hours of Desert Storm, that Schwarzkopf's JTF [Joint Task Force] headquarters received and processed a million messages. And I suggest to you that while fusion and sorting is important to resolve conflicts between different sources of information, it is not the solution to information overload.

"The solution to information overload," Welch emphasized, "is simply don't do it. Minimize what we push at the commander and maximize their access to the information that they want, when they want it, at the pace they want it, in the quantity they want it, and in the form that they want it."

Find Out What Works

Welch told the conferees that the central issue and challenge is how we first build the system, how we build the concepts,

and finally, how we can test and evaluate our ability to provide information and to use information in a way that translates into valid combat decisions. "How do we do that?" he asked the conferees.

There's an enormous amount that we must discover about what works, what doesn't work, and what it takes to make it work. According to Welch, every program is a challenge that requires experimentation. It requires figuring out what works. It's discovering the potential of using information in order to provide a pace of operations and overwhelming capability — precision operations. Inevitably, he believes, we will then structure the forces and the concepts and the organization to exploit that.

"We simply have to have trustworthy networks and trustworthy information," he emphasized, "because we will be betting the lives of soldiers, sailors, airmen, and Marines, and we will be betting the outcome of that particular liability."

Welch believes that maintaining the speed and pace of operations will ultimately enable U.S. forces "to provide the capabilities, because if we can do that — if we can sustain speed of operations, base of operations, precision operations, efficiency and effectiveness at the level that the potential suggests — then re-

gardless of how much information the adversary has, he simply will not be able to cope with that pace of operations."

Conference Activities

As the week progressed, 58 speakers came from all walks of DoD and industry to share their unique perspectives and experiences on topics ranging from hacking techniques and countermeasures to vulnerability assessments; from a Presidential Commission report to a national security perspective; from common flaws in information systems to securing our nation's infrastructure; from Y2K to Red Teams.

In addition to a Town meeting and four focus panels, those attending the conference spent several hours each day discussing, disagreeing, building consensus, questioning, answering, and learning from the experts. DoD and industry exhibits also gave them a hands-on look at some of the latest information systems platforms and initiatives.

Tutorials were available on four topics: Information Warfare, Developing Information Assurance Requirements, Hacking Techniques and Countermeasures, and National Defense University (Industrial College of the Armed Forces) Information Warfare T&E Course. Those attending the tutorials were awarded certificates of course completion, which qualify toward the 80 hours of continuing acquisition education required for members of the Acquisition Corps every two years.

Also during the conference T&E Awards Luncheon, Coyle presented awards to the civilian, contractor, and military Testers of the Year, as selected by the Office of the Secretary of Defense, and Departments of the Army, Navy, and Air Force. The first award presented was a posthumous award to the **Army Government Civilian of the Year, Charles Cavana.** James Thornton, Cavana's son, accepted the award on his father's behalf. Other honorees included:

ARMY MILITARY TESTER OF THE YEAR
Maj. Stephen M. Beatty, Advanced Concepts Test & Integration Directorate, U.S.

LOUIS J. "LOU" RODRIGUES, DIRECTOR, DEFENSE ACQUISITION ISSUES, NATIONAL SECURITY & INTERNATIONAL AFFAIRS DIVISION, U.S. GENERAL ACCOUNTING OFFICE (GAO), GAVE A PRESENTATION ON "RISK MANAGEMENT PRACTICES FOR SUCCESSFUL OUTCOMES."

DAVID S.C. CHU, VICE PRESIDENT, RAND CORPORATION, ARMY RESEARCH DIVISION, AND DIRECTOR ARROYO CENTER, SERVED ON THE TEST & EVALUATION FOCUS PANEL. CHU SPOKE ON HOW THE T&E COMMUNITY IS PERCEIVED BY THOSE IT IS INTENDED TO HELP.

Army Test & Experimentation Command

Army Contractor Tester of
the Year
Dr. David H. Brown, Battelle Corporation

Navy Military Tester of the Year
Cmdr. David Alan Dunaway, Commander, Operational Test and Evaluation Forces (COMOPTEVFOR)

Navy Contractor Tester of
the Year
Jerome C. Gehrig, PEO Cruise Missiles & Joint Unmanned Aerial Vehicles

Navy Civilian Tester of the Year
Robert E. Dufresne, Naval Sea Systems Command (NAVSEA)

Air Force Military Tester of
the Year
Capt. Michael J. Geyser, 33rd Flight Test Squadron

Air Force Contractor Tester
of the Year
David G. Bricker, 18th Flight Test Squadron

Air Force Civilian Tester of
the Year
Angelo Trunzo, 746 Flight Test Squadron

Office of the Secretary of
Defense Civilian Tester of the
Year
Larry Miller (award accepted by Mario Lucchese on behalf of Miller, who was recovering from a serious illness).

The last day of the conference was a classified session at Nellis AFB devoted to threats and responses, and test and evaluation results for systems/systems of systems.

Common Ground
Among the conferees, general consensus emerged on five key issues:

Issue 1
No system is safe, no firewall impervious, and no encrypted document exists for which the code can't be broken. All

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The solution to information overload is simply 'Don't do it.' Minimize what we push at the commander and maximize their access to the information that they want, when they want it, at the pace they want it, in the quantity they want it ...

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systems are subject to, will be, or are being penetrated. Deputy Secretary of Defense John Hamre has stated that we are "at war" in this area.

Issue 2
The problem with the cyber war is that DoD and the public at large don't generally accept the reality that this is a war and that it's ongoing. The country basically operates as if the reality is a minor inconvenience or doesn't exist. But as defense and the infrastructure start becoming almost one and the same (for example, 90 percent of defense communications are over commercial lines), the nation needs to start thinking about its defense as not one and the same, but at least dependent/interdependent with

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the nation's infrastructure, whether it be the economic infrastructure, the financial infrastructure, or the industrial infrastructure.

Issue 3
Government and industry must work together to solve the Y2K problem; it must be "operationalized" and taken seriously at every level of command and throughout our nation's critical infrastructures.

Issue 4
The nation has become critically dependent on its information infrastructure. Even though the Deputy Secretary of Defense has stated the nation is "at war," Congress and DoD have not yet committed the resources to fund IW/IA in proportion to the threat. Next year 25 people will have a budget of about $20 million to address this problem —a problem that could bring this nation economically to its knees.

Issue 5
No one at OSD seems to be in charge of IW/IA. The apparent lack of a clear chain of command was mentioned consistently throughout the conference by individuals from the rank of lieutenant to major general and above. Clearly, the field does not understand who is in charge.

This Is Real Work
General Larry Welch called IW/IA "a huge task in developing these capabilities and an even larger task in figuring out how to do that with test and evaluation." He commended the IW/IA challenge to "NDIA and this room full of dedicated T&E practitioners," stating that "This is a contest we can win if we focus on the right stuff, and we focus at the right intensity."

At the close of the conference, James F. "Jim" O'Bryon, Deputy Director, Operational Test and Evaluation/Live Fire Testing, and Conference Moderator, best captured the mindset of NDIA and the conferees: "We need to change the way we're doing business in IW and IA," O'Bryon told the conferees. "I don't want to be a victim of the future. I want to change it ... and it's going to take work."

Defense Reform Initiative Made Part of Day-to-Day Operations

Stan Z. Soloway, DUSD (Acquisition Reform), Tapped to Direct Defense Reform

Secretary of Defense William S. Cohen today announced organizational changes affecting the Department's Defense Reform Initiative. In order to make defense reform a part of the day-to-day operations of the Department of Defense, Cohen has moved responsibility for the DRI to the office overseeing acquisition reform.

Deputy Under Secretary of Defense for Acquisition Reform Stan Z. Soloway will also serve as director of Defense Reform, reporting directly to the Secretary in his DRI capacity. Soloway will be "dual-hatted," retaining his duties in the Office of the Under Secretary of Defense (Acquisition and Technology).

The Defense Reform Initiative, announced in November 1997, is designed to streamline the organizational structure and business practices of the Department of Defense. In a March 1 update on DRI progress, Cohen stated current reform efforts build on four pillars: elimination, reengineering, consolidation, and competition. The overall effort has expanded, however, to now include reforms in acquisition, logistics, financial management, quality of life for DoD personnel, and new missions for the 21st century. To maintain DRI momentum, Cohen decided to institutionalize the process in the Department's existing organizational structure.

In announcing these changes, Cohen commented, "Defense Reform is now more than 16 months old and has experienced numerous successes. We jump-started implementation by placing DRI directly in my office, but to maintain momentum, this initiative must be a part of the Department's daily operations. Placing it in the Acquisition Reform office – which is currently involved in numerous aspects of the DRI – is a key step in achieving that goal."

Cohen thanked outgoing DRI Director William (Bill) Houley for his outstanding work, stating achievements in the past year would have not been possible without his leadership.

Soloway joined the Office of the Under Secretary of Defense (Acquisition and Technology) in March 1998. Prior to joining the Department of Defense, he was a public affairs and public policy consultant to a wide range of companies and associations for 20 years. Soloway's particular expertise includes government contracting, acquisition policies, and competitive sourcing/privatization issues.

Editor's Note: This information is in the public domain at **http://www.defenselink.mil/news** on the Internet.

Before House Armed Services Subcommittee
Subcommittees on Research and Development and Procurement

"FY 2000 Budget for Ballistic Missile Defense"

ood morning, Mr. Chairman, members of the committee, and staff. It is a privilege to appear before you today to discuss the Administration's strategy to protect both our warfighters and our homeland from the growing threat posed by weapons of mass destruction delivered by ballistic missiles. General Lyles, General Martin, and I will review with you the architecture we envision to provide that protection, and the programs we are currently pursuing within that architecture ... I would like to take this opportunity to thank the committee for the strong support it has given to missile defense, to include the recent authorization and appropriation of additional funds for the program.

The Threat

Our defense strategy for the 21st century seeks to shape the international security environment in ways favorable to U.S. interests, to prepare for an uncertain future, and to respond to the full spectrum of threats – from whatever the source.

A series of very dramatic and terrifying world events this past year has made us painfully aware of the vast, complex geopolitical, economic, and technological upheaval that is taking place in the world. We no longer need to be reminded that we face a very real – and present – set of new threats from a variety of asymmetric forces capable of being directed against us from all parts of the world. I need not tell the members of the committee that recent terrorist bombings in Kenya and Tanzania,

the conflicts in Bosnia and Kosovo, the North Korean and Iranian ballistic missile launches, the nuclear tests in India and Pakistan, the growing proliferation of low-cost cruise and ballistic missiles, and the sophisticated cyber attacks on the U.S. Department of Defense computer systems have brought home to all of us the very real nature of the present and growing threats to our national security.

Today, more than 20 countries possess or are developing weapons of mass destruction. More than 20 nations have theater ballistic missiles or cruise missiles to deliver them. Some of these countries are developing much longer-range ballistic missiles.

Theater-range missiles already in hostile hands pose an immediate and increasing threat to U.S. interests, military forces, and allies. More countries are acquiring ballistic missiles with ranges up to 1,000 km, and more importantly, with ranges between 1,000 km and 3,000 km. Iran's flight test of its Shahab 3 medium-range missile demonstrates that we are no longer dealing with a hypothetical threat. We are dealing with a real threat that is with us now. With a range of 1,300 km, the Shahab 3 significantly alters the military equation in the Middle East by giving Tehran the capability to strike targets in Israel, Saudi Arabia, and
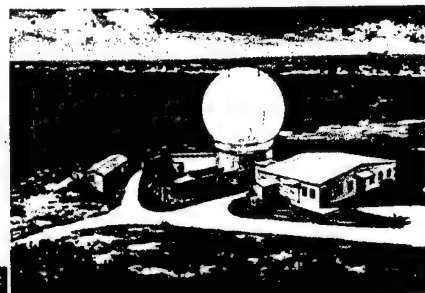
BATTLE/MANAGEMENT/COMMAND, CONTROL AND COMMUNICATIONS (BM/C3) CENTER UNDER CONSTRUCTION WITH ARTIST'S RENDERING.

most of Turkey. Among those countries seeking longer-range missiles, North Korea is the most advanced: a judgment underscored by the recent launch of the Taepo Dong-1.

The U.S. missile defense program underscores the urgency of meeting this immediate threat. A missile defense system reduces the likelihood that a ballistic missile attack could achieve its intended objectives. Equally important, missile defenses contribute to the reduction and prevention of missile proliferation and strengthen regional stability, both critical for shaping the international security environment.
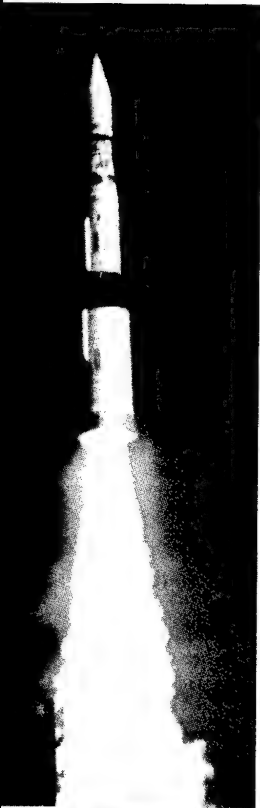
GROUND BASED
INTERCEPTOR IN FLIGHT
INF1 TARGET LAUNCH
JUNE 24, 1997

DEFENSE SUPPORT PROGRAM/ SPACE
BASED INFRARED GEOSYNCHRONOUS AND
HIGH ELLIPTICAL EARTH ORBIT SATELLITE
(DSP/SBIRS GEO)

SPACE BASED INFRARED SYSTEM
LOW EARTH ORBIT (LEO)
(SPACE AND MISSILE TRACKING SYSTEM)

The Administration's Strategy

Our current missile defense program is affordable and can be successfully executed. It is well matched to the missile threats we will face. In addition, we have increased funding in the FY 2000 Pres-

ident's Budget for the National Missile Defense and Navy Theater Wide programs.

As we began our deliberations in support of the FY 2000 President's Budget submission, we were faced with making a number of decisions affecting both the ballistic missile defense mission and other missions of the Department, as well as decisions on how to proceed with programs within the ballistic missile defense arena: when to provide the fund-

ing to deploy our National Missile Defense program, how best to field an upper-tier Theater Missile Defense system quickly and affordably, what quantities of our lower-tier systems we should buy, and how quickly to proceed with our Airborne and Space Based Laser efforts. We also had to align the Space Based Infrared System (SBIRS) components to make the best use of our existing missile warning assets as well [as] meet the needs of our missile defense mission, taking into account both resource and technology constraints and their impact on setting realistic launch dates.

The decisions we made were based on the Department's fundamental priorities concerning our missile defense program. These priorities have not changed over

the past year. We must defend U.S. troops against the threat posed by the theater ballistic missiles and cruise missiles. Within the Theater Missile Defense (TMD) mission area, we must first field systems to defend against the existing short- to-medium-range missiles — our lower-tier systems. Next we must proceed to add upper-tier systems for defenses over wide areas against longer-range theater ballistic missiles as that threat emerges and as our technology allows. At the same time, we should continue developing the Airborne Laser (and, subsequently, the Space Based Laser) to provide boost-phase intercept capability.

Equally important, we must develop an early capability to defend against a limited strategic ballistic missile attack by a rogue nation — via our National Missile Defense (NMD) program.
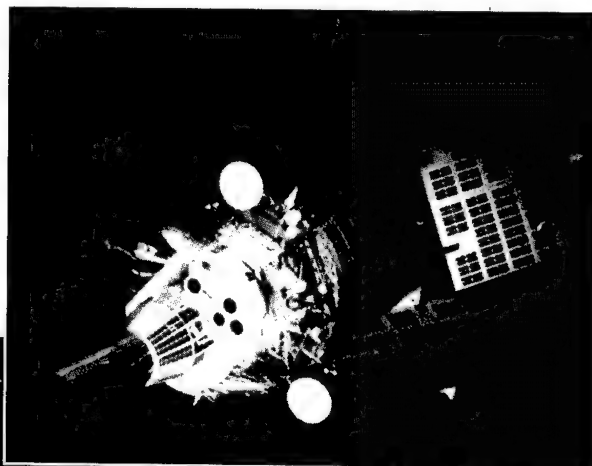
Finally, we must continue to develop a robust technology base to underlie these two programs — both the TMD program and the NMD program — which will allow us to develop and deploy more advanced missile defense systems over time as the threat systems they must counter become more advanced.

The Ballistic Missile Defense Architecture

In light of the widespread deployment of theater ballistic missiles today, the Department's immediate missile defense priority is to develop, procure, and deploy Theater Defense systems to protect forward-deployed elements of the U.S. armed forces, as well as allies and friends, against cruise and ballistic missiles (as well as aircraft). This plan envisions time-phased acquisition of multi-tier, interoperable missile defense systems that provide defense in-depth against theater ballistic and cruise missiles. The Ballistic Missile Defense Organization, the Joint Staff's Joint Theater Air and Missile Defense Organization, and the Military Services share the responsibility for developing improved capability to defend against such threats.

No one system can meet all of the demanding and complex tasks necessary

to satisfy the warfighting commander's theater missile defense requirements. Since the mission cannot be accomplished with just one or two systems, we are developing multiple systems designed to counter the threat during all phases of flight. We call this the Theater Air and Missile Defense Family of Systems. To work effectively, this Family of Systems must be interoperable and capable of sharing and exchanging information, providing a common view of the battlespace.

The Department has taken significant steps in the last year toward realizing the interoperable Theater Air and Missile Defense Family of Systems. Of note, the Theater Missile Defense Capstone Requirements Document, which specifies the joint warfighter's overarching requirements, received Joint Requirements Oversight Council validation, thereby providing us, for the first time, a set of formal, overarching, joint missile defense requirements. In short, we are working to define and build the Theater Air and Missile Defense Family of Systems in the same manner that it will be used — jointly.

Lower-Tier Systems

Lower-tier systems remain the top priority to defeat short-range ballistic missiles. The Patriot Advanced Capability-3 (PAC-3) and the Navy Area Defense systems are the key lower-tier systems for this mission. PAC-3 will provide air defense of ground combat forces and defense of high-value assets against high-performance air-breathing threats and theater ballistic missiles. The FY 2000 budget request calls for procurement of 32 PAC-3 missiles, with first unit equipped projected for FY 2001. The development of the missile's "seeker" software was more difficult than anticipated and delayed the first attempted intercept last year and, therefore, the program. The first intercept attempt is now back on track for March, and, consistent with Congressional intent, the program will require two successful intercepts before proceeding to low-rate initial production, which we expect later this year.

The Navy Area Defense program will provide a sea-based, lower-tier capability to U.S. forces, allied forces, and areas of vital national interest at sea and in coastal regions against air-breathing threats and theater ballistic missiles. The FY 2000 budget request calls for 23 SM-2 Block IVA missiles to start off the low-rate initial production buy. Recent delays in the next phase of development of the Aegis weapon system software have impacted the program's schedule. The first unit equipped is projected for FY 2003, and it will require two successful TBM intercepts, as with Patriot's PAC-3, and an additional anti-air warfare intercept, before proceeding to low-rate initial production in late FY 2000.

Upper-Tier Systems

Our upper-tier systems — the Theater High Altitude Area Defense system and the Navy Theater Wide program — are designed to intercept incoming missiles at high altitudes in order to defend larger areas, defeat medium- and long-range theater ballistic missiles, and increase theater commanders' effectiveness against weapons of mass destruction by providing a layered defense. THAAD and Navy Theater Wide will make possible an effective protection of broad areas, dispersed assets, and population centers against missile attack. The Navy Theater Wide system builds upon the existing Aegis weapon system as well as the Navy Area Defense system. Compared to last year's budget request, we have increased funding for Navy Theater Wide by more than half a billion dollars in FY 1999-2001, including funds added by the Congress last fall, so that we can pursue this program as a major defense acquisition program. Additionally, as part of the program's risk mitigation development efforts, we are looking to cooperative efforts with Japan to evolve the capability of the Block I missile into the Block II variant.

We have established a combined "upper-tier" funding profile in FY 2002-2005. We believe this is the best way to meet our objective to field an upper-tier system capability by 2007. Extensive developmental testing for both THAAD and Navy Theater Wide is planned in 1999 to 2001. In the near term, THAAD will continue flight testing with missiles of the current design; and tests of the Aegis Lightweight Exo-Atmospheric Projectile (LEAP) will demonstrate the Navy Theater Wide system concept. We will examine both programs after initial flight testing to determine system progress. Based on this progress, and an assessment of cost, schedule, technical performance, and program risk, the Department will allocate upper-tier program resources to focus on the most successful program. Depending on the results of the review, the other system might continue to be developed, most likely at a slower pace. We expect to make this decision before submitting the FY 2002 budget request.

To defeat theater ballistic missiles during their boost phase, we are developing the Airborne Laser (ABL) system. This adds an important additional layer of defense to the architecture. By terminating powered flight early, ABL thus confronts an adversary with the prospect of having missile payloads fall short of their targets, perhaps on the adversary's own territory. The ABL aircraft will be a modified 747-400 freighter, carrying a megawatt-class laser system, beam control optics to compensate for the atmospheric turbulence between the aircraft and the target, and a battle management C4I capability. This capability enables the system to locate and engage targets autonomously, and also provides cueing, launch point location, and tracking data to other missile defense units.

The ABL program passed its Milestone I review in November 1996, when it established an acquisition program baseline, and recently passed its Authority-to-Proceed-1 (ATP-1) review in June-September 1998. The program is restructuring to accommodate a Congressionally mandated $25-million reduction in FY 1999 funding, so these dates are subject to change, but we expect to begin modifying the first demonstrator aircraft in January 2000, and conduct a lethal shoot-down of a realistic target in September 2003.

As directed by the FY 1999 Authorization, the Department is conducting an as-

sessment of the technical and operational aspects of the ABL program, concurrently with a review by an independent team of non-Department of Defense experts, who are assessing the testing and operational concepts. Overall, the ABL program has made good progress. In September 1998, laser system power was demonstrated at 110 percent of the design specification — a major success story.

Many of the capabilities needed for effective cruise missile defense are either evolving from existing systems or are in development. For example, an interoperability Advanced Concept Technology Demonstration will network, under the Cooperative Engagement Capability, selected ballistic missile defense sensors; battle management/command, control, and communications; and weapons (including the PAC-3 and Navy Area Defense lower-tier systems) to provide capabilities against cruise missiles. A key objective of cruise missile defense efforts is to leverage the synergy between ballistic missile, cruise missile, and air defense, and to integrate various systems that contribute to cruise missile defense into a comprehensive architecture.

Additionally, advanced technology programs for cruise missile defense focus on shooting down land-attack cruise missiles at extended ranges, possibly over an adversary's territory — adding depth to existing capability. To ensure the Department is positioned to capitalize on all of these developments, the Commanders-in-Chief, the Services, the Ballistic Missile Defense Organization, and the Joint Theater Air and Missile Defense Organization are developing joint employment concepts and an investment plan for Theater Air and Missile Defense.

International Cooperation Programs

The increased likelihood of committing forces to coalition operations makes the case for greater armaments cooperation with friends and allies. The Department's approach to international participation in the development and deployment of theater missile defense systems continues to build upon consultations with our

allies and friends and the establishment of bilateral and multilateral research and development programs.

The Medium Extended Air Defense System (MEADS) is a cooperative development program between the U.S., Germany, and Italy to develop a mobile cruise and ballistic missile defense system. Recently, the Department decided that the planned MEADS system was unaffordable as structured. Therefore, we are redirecting MEADS towards the development of evolving technologies that will be lower risk and more affordable, and yet allow us to meet the requirement for a highly mobile, rapidly deployable system for defense of our maneuver forces. The FY 2000 budget provides about $150 million over the next three years for technology development, focusing on a 360° fire control radar and a mobile launcher, and utilizing the PAC-3 missile as the MEADS interceptor. The Department has kept its international partners apprised of the proposal to restructure MEADS and hopes they will join in this new approach.

The Arrow Continuation Experiments program, a cooperative program with Israel, concluded with the successful Arrow II flight test in September 1998. Given the success of this program, Israel committed to the near-term deployment of an active theater missile defense system. In 1998, amendments to the Arrow Deployability Program agreement provide for the integration, test, and evaluation of the Arrow Weapon System, namely, the jointly developed Arrow interceptor and Israeli-developed ground equipment, focused on enhancing the system's interoperability with U.S. theater missile defense systems. It also gives Israel the option of acquiring an additional surveillance/fire control radar for an eventual third Arrow battery. The FY 2000 budget provides nearly $120 million over the next three years for the deployability program, a hardware simulation testbed, and an architecture analysis study. We are currently developing interface requirements (hardware, software, and procedures) to establish some level of interoperability between Arrow and the Patriot systems.

The Russian American Observational System (RAMOS) program was initiated in 1992 to engage the Russian Federation in cooperative early warning and theater missile defense research with the primary goal to build confidence through cooperation. The technical goals were defined to answer questions concerning risk areas for future early warning space programs. In the past two years, we have developed Russian and American sensors and jointly tested them aboard a U.S. aircraft, demonstrating significant technical cooperation, and we have taken the first joint images from space. We strongly wish to continue our cooperative efforts involving early warning satellite technologies. We have recently identified two potential future research projects that are consistent with the original objectives for RAMOS. They are: 1) to continue aircraft experiments and simulations to study mid- and long-wave infrared background clutter as it applies to theater missile tracking, and 2) to fund Russian early warning prototype sensor development for future space flight. We will spend $8 million in FY 2000, and $13 million between FY 2001-2002 on this effort, and provide about half of this funding for the Russian research efforts. We will also fund Russian research on early warning — providing almost $8 million in FY 2000 and $20 million between FY 2001-2002. We expect to have discussions with the Russians next month on continuing this important series of experiments.

National Missile Defense

The submission of the FY 2000 budget request marks a major change in the Administration's funding of the National Missile Defense program. The addition of $6.6 billion in new funding brings total FY 1999-2005 resources for NMD to $10.5 billion, of which $9.0 billion is allocated in FY 2000-2005. The added funds will protect the option to deploy a national missile defense system. However, no decision for deployment has been made. A June 2000 decision regarding deployment is expected to be based primarily on the maturity of national missile defense technology as demonstrated in development and testing, the

assessment of the threat, the affordability of the system, and treaty issues.

The national missile defense program is postured to respond to the possibility that a rogue nation could come to possess intercontinental ballistic missiles that could threaten the United States. This possibility was underscored by the August 1998 North Korean attempt to launch a satellite, using as a platform a Taepo Dong-1 (TD-1) missile with an added third stage. The test demonstrated that North Korea continues to be interested in developing long-range missile capabilities and that it has made considerable progress.

That launch demonstrated some important aspects of ICBM development, most notably multiple-stage separation. While the intelligence community expected a Taepo Dong-1 launch for some time, it did not anticipate that the missile would have a third stage or that it would be used to attempt to place a satellite in orbit. The intelligence community's current view is that North Korea would need to resolve problems with the third stage prior to being able to use the three-stage configuration as a ballistic missile to deliver small payloads to intercontinental ranges (that is, ranges in excess of 5,500 kilometers); and they would, of course, also have to solve warhead reentry problems. Nonetheless, a three-stage variant of the TD-1 could soon pose a threat, if it cannot already, to portions of the United States sooner than estimated previously.

The national missile defense system under development would have, as its primary mission, defense of the United States — all 50 states — against a small number of intercontinental-range ballistic missiles launched by a rogue nation. Such a system would also provide some residual capability against a small accidental or unauthorized launch of strategic ballistic missiles from China or Russia. It would not be capable of defending against a large-scale, deliberate attack.

Of the $6.6 billion in new funds programmed for national missile defense,

$600 million will be provided using the FY 1999 Emergency Supplemental for Ballistic Missile Defense. These supplementary funds permit additional risk-reduction efforts, as well as activities needed to ensure a smooth transition to deployment should a decision be made in FY 2000 to begin deploying the system. Previous plans for testing national missile defense components and the system prior to the deployment decision remain unchanged. In June 1999, the performance of the exo-atmospheric kill vehicle will be demonstrated in the first national missile defense intercept attempt. Subsequent tests, to be conducted before the June 2000 decision point, will further evaluate the system's performance, culminating in an "end-to-end" systems test in the second quarter of FY 2000.

To maximize the probability of programmatic success and be able to deploy a technologically capable system as quickly as possible, key national missile defense decisions will be phased to occur after critical integrated flight tests. As a result, instead of projecting a deployment date of 2003 with exceedingly high risk, the Department now projects a deployment date of 2005 with much more manageable, although still high, risk. The funds added to the national missile defense program in FY 2001-2005 support a deployment in FY 2005. The majority of national missile defense funding through FY 2000 is in the RDT&E appropriation; procurement funding would begin in FY 2001. Military construction funds are programmed in FY 1999 for design, while construction is funded in FY 2001-2005.

If testing goes flawlessly, and there is a willingness to accept higher program risk, we could seek to deploy sooner. But independent analysts have expressed concern that the Department's fast-paced schedules for ballistic missile defense programs have sometimes represented a "rush to failure." Given the reality of the threat, the national missile defense program cannot afford to fail.

The Air Force's Space Based Infrared System (SBIRS) system is an important element of our BMD program. Both components of the SBIRS program, SBIRS-High and -Low, have seen significant cost growth and technical challenges during the past year. The President's Budget restructures both components of the SBIRS program to make optimum use of available Defense Support Program satellites, yet provide timely support to the ballistic missile defense mission.

In that regard, we are rescheduling the SBIRS-High program's first launch of its geosynchronous satellite to FY 2004. We currently have five Defense Support Program satellites awaiting launch, and the Department, in executing its stewardship responsibilities, must make full use of those satellites before launching a replacement system. The new SBIRS-High schedule synchronizes well with the new national missile defense schedule in that the required number of SBIRS-High geosynchronous satellites (two) will have been launched in time to support a national missile defense deployment in 2005. It should be noted that, although SBIRS-High will provide improved performance compared to its predecessor in all mission areas, the Defense Support Program is adequate for the strategic warning mission. And the Defense Support Program can support the initial deployment of the national missile defense system, with only a very slightly reduced confidence level of successful defense.

We are also restructuring the SBIRS-Low component, resulting in a planned first launch in FY 2006. This change is driven primarily by the technical challenges and complexities inherent in the system. As part of the SBIRS-Low restructure, after the formulation of the FY 2000 President's Budget, we cancelled the two flight demonstration experiments that were part of our earlier-conceived risk reduction effort. Much has already been learned and significant risk has been mitigated through the design, fabrication, assembly, and integration accomplished to date. Continuation of the flight experiments is not critical to SBIRS-Low, and the remaining program risk is best addressed in the now more robust Program Definition studies that will constitute the next phase of the SBIRS-Low

acquisition. We intend to pursue the SBIRS-Low program in a manner consistent with program risk and the need to support our BMD programs.

Advanced Technology Development

Activities in the missile defense technology base are key to countering future, more difficult threats. The technology base program underpins the theater ballistic missile defense, cruise missile defense, NMD, and Space Based Laser programs. It will enable the Department to provide block upgrades to baseline systems, perform technology demonstrations, reduce program risk, accelerate the insertion of new technologies, and develop advanced technologies to provide a hedge against future surprises. Advanced technologies are also being exploited to reduce the cost of future missile defense systems.

In the past, BMDO explored many potential solutions to ballistic missile defense, including exotic or leap-ahead technologies (X-ray lasers, neutral particle beams, Brilliant Pebbles). Today's thrust is to provide research and development in technical areas that support our missile defense programs. Three programs in particular illustrate BMDO's current thinking: 1) the Atmospheric Interceptor Technology program, which develops advanced missile technologies

for PAC-3, THAAD, and Navy Theater Wide to address advanced threats and reduce cost; 2) the Exoatmospheric Interceptor Technology program, which is developing and demonstrating advanced seeker concepts, as well as advanced materials, to provide upgrades to both NMD and TMD interceptors, to counter the evolving threat and reduce cost; and 3) the Advanced Radar Technology program which improves signal processing capabilities and reduces key component costs. We expect these programs to provide useful hardware and data to the TMD and NMD programs.

Recently, BMDO and the Air Force had an Independent Review Team of laser, operational, and programmatic experts examine the Space Based Laser program. They proposed that any orbital flight experiment be preceded by extensive integrated ground demonstrations of key technologies and flight system elements. The subsequent orbital spacecraft experiment they envision would demonstrate large, lightweight deployable optics, a new concept in very large mirrors that could enable dramatic savings in vehicle weight and attendant cost.

We have developed a laser technology program that balances long-term research and development goals with a nearer-term goal to demonstrate the basic feasibility of a system. The total

outlay for the program will be $139 million in FY 1999 and $139 million per year through FY 2000-2005. The technology program, jointly funded by BMDO and the Air Force, will fund a ground demonstration and permit a subsequent decision to increase funding enroute to orbiting a spacecraft. Affordability — both of a demonstration flight and of an eventual operational system — is a key concern on which we intend to focus.

Summary

The Department's priorities take into account the most immediate threats — those posed by theater ballistic missiles — and are consistent with the priorities of the Joint Chiefs of Staff and the warfighters. We continue to review our theater missile defense programs to ensure we have the most effective overall architecture and one that is both affordable and executable.

Our national missile defense program remains on a highly accelerated track to ensure we are positioned to respond to an emerging rogue nation threat. The Department has worked closely with the committee over the years to ensure that the United States possesses the necessary means to defend its people and forces. Again, I want to thank you for your support, and I look forward to continuing our work together.

The Ballistic Missile Defense Organization's National Missile Defense (NMD) Joint Program Office is scheduled to conduct the first test involving an intercept of a ballistic missile target this summer.

Program officials are currently working toward a flight test in mid-to-late August, dependent upon their confidence that all assets are ready to support the flight test. The test will involve the launch of a target missile from Vandenberg AFB, Calif., and a prototype interceptor from Kwajalein Atoll in the central Pacific Ocean. Originally scheduled for mid-June, the NMD program manager and the Boeing Co., NMD Lead Systems In-

tegrator (LSI), made the decision that additional time is needed to complete detailed systems checks and inspections prior to the test.

Plans also had to take into account the availability of the Kwajalein Missile Range, preparation of the target missile at Vandenberg AFB, and the readiness and availability of the many different evaluative, command and control, documentation, and operational assets required for the test.

Point of contact for the NMD Program Office is Lt. Col. Rick Lehner, (703) 604-3186.

Management and Measurement

RAYMOND W. REIG • MAJ. WILLIAM J. SWANK, U.S. AIR FORCE

A popular saying about managing the acquisition process is that "You can't manage what you can't measure." With this in mind, the Office of the Director of Operational Test and Evaluation (DOT&E), Department of Defense, asked three faculty members of our Test and Evaluation Department at the Defense Systems Management College (DSMC) to analyze what makes systems development programs successful in the Engineering and Manufacturing Development (EMD) phase. As a result, we published DSMC Technical Report TR-2-95.[1] This report commented on several program parameters during EMD, including cost and schedule success, but not performance success.

Since then, we have completed two more research phases. The first phase evaluated the performance success of the original 24 programs. Detailed results appeared in the Proceedings of the 1997 Acquisition Research Symposium.[2] The second follow-on phase applied the original research methodology for evaluating performance success to 20 more recent programs, and is the focus of this article.

Creating a Tool to Measure Success

Beginning in 1993, the original research helped develop criteria for cost, schedule, and performance success during EMD. To measure performance success, we devised a success scale of 1 (not successful) to 5 (very successful). For cost and schedule, we measured the degree of overrun experienced in EMD using standard DoD decrements of 15 percent in cost and six months in schedule, which we then converted to success ratings of 1 to 5.

Using descriptive criteria, which discriminated among the five possible ratings, we subjectively applied performance success ratings. These descriptive criteria indicated what the content of the Initial Operational Test and Evaluation (IOTE) or Operational Evaluation (OPEVAL) report would be like in each of the five rating gradations. For each program, the IOTE/OPEVAL reports and associated DOT&E Beyond Low Rate Initial Production (BLRIP) report were rated. We also reviewed the performance criteria prior to, and immediately after

reading each report, and then assigned a performance success rating.

As standard procedure, IOTE/OPEVAL reports comment on operational effectiveness and operational suitability. A simplified definition of operational effectiveness is the degree of mission accomplishment of a system when used by representative personnel in the expected environment. Operational suitability can be defined as the degree to which a system can be placed satisfactorily in field use with consideration given to several operational features, including those generally referred to as the "ilities."

Improving Overall Performance

Figure 1 compares the average results of the original 24 programs with the follow-on 20 programs. The original programs went before the Defense Acquisition Board at Milestone III for Full Rate

FIGURE 1.

Research Phase	IOTE/OPEVAL Report (OTAs)♦			BLRIP Report (DOT&E)		
	Effectiveness	Suitability	Overall	Effectiveness	Suitability	Overall
Original 24 Programs (1980-1992)	3.6	3.1	3.4	3.5	3.1	3.5
Follow-on 20 Programs (1993-1997)	4.5	4.1	4.4	4.0	4.1	4.2

♦ Service Independent Operational Test Activity

Reig is a visiting research professor at DSMC. He is a graduate of the U.S. Naval Academy, the Air War College, and the DSMC Program Management Course. He was the first chairman of the DSMC Test and Evaluation Department and is now in the college's research division. His more than 35 years of experience spans military, government, and private aerospace industry. **Swank** is a professor of engineering management at DSMC. He is a graduate of Ohio Northern University, Troy State University, the Air Command and Staff College, and the DSMC Program Management Course. He is a member of the DSMC Test and Evaluation Department and has experience in weapon systems development, test and evaluation, and aircraft maintenance. The authors wish to thank **Dr. Ernest Seglie** for the chronological baseline concept. He has been the science advisor to the Director of Operational Test and Evaluation since 1988. He has advised all three directors to date.

Production (FRP) approval, between 1980 and 1992. The median date for these programs was mid-1988, and the average duration of the EMD phase was 7.4 years. The follow-on programs had their Milestone III FRP decision, or equivalent, between 1993 and 1997. The median date for these programs was early 1995.

Figure 1 also shows that during the period 1980-1992, the average overall performance success rating for OTA test and evaluation reports was 3.4 (out of a possible 5.0); it was 3.5 for DOT&E reports. During the period 1993-1997, the average overall performance success rating climbed to 4.4 for OTA test and evaluation reports and improved to 4.2 for DOT&E reports.

One of our responsibilities in the DSMC Research Division is information dissemination. Consequently, we make all research data immediately available for use in new and unique analytical ways. An example of this is the summary data for overall OTA and DOT&E performance ratings on a year-by-year basis (Figure 2).

Accounting for Improved Performance Ratings
An unanswered question caused this significant improvement. Current research data do not provide the answer, but several possibilities suggest further research may. Possible reasons for this improvement include:

REASON 1
The improvement is due to the effects of acquisition reform initiatives. Possibly, but the first practical date one can ascribe Acquisition Reform results actually being implemented in the field is probably beyond the time when actions could have affected these particular 20 systems. The earlier research showed the average duration of EMD to be 7.4 years; any action taken after a program is more than halfway through EMD would have little effect.

REASON 2
The 24 programs developed under an earlier version of the 5000 Series required

The commanders of the Service OTAs realized (Possibly also in the 1991 time frame) that they no longer could operate in the mode of being the independent director of the "final exam" — the IOTE/OPEVAL — just prior to Milestone III.

important user requirements like the Operational Requirements Document and Initial Operational Capability to be stated at Milestone I. In this time period, it was generally understood that these requirements were firm and not subject to change.

In February 1991, a revised 5000 Series stated that these and other requirements were subject to review at each milestone. This allowed for a more reasoned approach to changing requirements as more data were developed, and allowed the program manager to suggest changes in a more receptive environment.

REASON 3
The commanders of the Service OTAs realized (possibly also in the 1991 time

frame) that they no longer could operate in the mode of being the independent director of the "final exam" — the IOTE/OPEVAL — just prior to Milestone III. Rather, they initiated an earlier consultative role with the Developing Activity, and by means of Early Operational Assessments, worked with the program managers to clarify what would be expected at the IOTE/OPEVAL. This change in modus operandi occurred before the acquisition reform initiative of Integrated Product Teams.

Our opinion is that the most probable cause for the improvement in the success of systems in operational testing is a combination of Reasons 2 and 3. If this is true, then the unsung heroes of the pre-acquisition reform efforts to improve the DoD acquisition system are the Office of the Secretary of Defense managers and staffs who issued the February 1991 revision to the 5000-Series documents, and the commanders and test directors of the OTAs who, on their own initiative, modified operational test procedures to include an early consultative phase.

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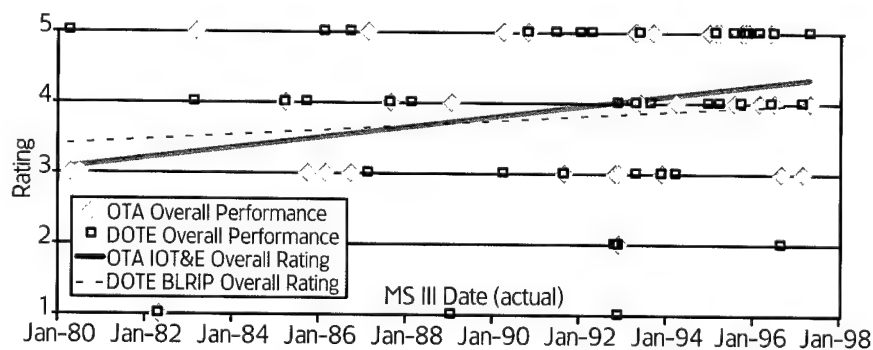
FIGURE 2. EMT Performance Trends (All Programs)

ACQ 201 Equivalency Examination
FY99 Schedule

nder the auspices of the Defense Acquisition Workforce Improvement Act (DAWIA), Defense Systems Management College (DSMC) course directors have administered over 20 Intermediate Systems Acquisition Course (ISAC) equivalency examinations since 1994 to DoD personnel seeking course validation. ISAC, or ACQ 201, is a certified Defense Acquisition University (DAU) Level II course offering, which meets mandatory or desired training requirements for DAWIA certification in six of 11 acquisition career fields. Over 300 members of the acquisition workforce have passed the exam.

In Fiscal Year 1999 (FY99) ACQ 201 will be offered at the main Fort Belvoir, Va., campus as well as our four DSMC Regional Centers. Equivalency examinations consist of two parts and are conducted over a two-day period.

Day 1

On the morning of Day 1, the on-site director fields questions from the examinees. In the afternoon, examinees complete Part I of the examination, consisting of 100 multiple-choice questions. At the end of Day 1, course directors post test scores; those examinees receiving a passing score of 70 percent or more may return on Day 2 for Part II.

Day 2

Beginning on the morning of Day 2, Part II consists of 10 essay questions from a choice of 12 possibilities. Part II will be collected on-site and mailed to the ACQ 201 course director, who will grade the essay portion and award diplomas to those who achieve a 70 percent or above passing score.

Success rates for the examinees are quite high. In FY 98 testing, 75 percent of all examinees achieved a passing score for Part I of the examination, and of those who went on to complete Part II, 80 percent attained a passing score.

Please note that a nominal number of textbooks are available at the DSMC Regional Centers for study and preparation prior to the examination. If you are interested in taking the ACQ 201 equivalency examination, please first contact your agency's on-site training and education coordinator, who will then facilitate your participation in the examination with the appropriate ACQ 201 course director/DSMC Regional Center director.

Should you have any further questions, please contact Air Force Maj. Art Greenlee, FD-AP:

Commercial: (703) 805-4987
DSN: 655-4987
E-mail: greenlee_arthur@dsmc.dsm.mil

June 15-16* Los Angeles AFB, Calif.   DSMC Western Region
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*At this time, DSMC has no further equivalency examinations scheduled for FY99.

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Demilitarization — Reclamation vs. Destruction

GARY L. LAWSON • THOMAS H. HOWELL

With the close of World War II, the United States and the Soviet Union (now Russia) began a 44-year rivalry known as the Cold War. In their hopes of thwarting the other's ideology and increasing their respective influence, the two superpowers began stockpiling tactical missiles. Because the Cold War did not escalate into World War III, most of those missiles were never used.

Today, the end of service life for many of those missiles is rapidly approaching, and creating a challenge for program managers, who must find safe, cost-effective ways to demilitarize these weapons. Because of Foreign Military Sales (FMS) customers, this is a worldwide problem (Figure 1).

CCAWS Develops Plan

Life Cycle Cost (LCC) models are developed and used to support acquisition activities by Program Managers (PM) and acquisition executives, according to an article by Army Brig. Gen. Joseph L. Yakovac and Wesley L. Glasgow. Although they are well focused for development, acquisition, and deployment ownership cost, most LCC models do not include the cost to demilitarize assets. Yet, PMs' responsibilities truly encompass "cradle-to-grave" functions. The Close Combat Anti-Armor Weapon Sys-

tems (CCAWS) project office has recognized this challenge and developed a plan to reduce Tube-Launched Optically Tracked Wire-Guided (TOW) missile demilitarization cost — potentially to zero — with industrial partnerships. These costs will be comparable to Open Burn/Open Detonation (OB/OD) without incurring environmental liabilities.

Demilitarization — A Costly Battle

Demilitarization cost threatens force modernization objectives with signifi-

cant budgetary pressures. In August 1997, Dr. Kenneth J. Oscar, Acting Assistant Secretary of the Army (RDA) and Lt. Gen. Paul J. Kern, Military Deputy to the Assistant Secretary of the Army (RDA) challenged the Program Executive Officer (PEO) Tactical Missiles to develop a plan that reduces or eliminates demilitarization cost.

The Army has a compelling need to develop a cost-effective, environmentally safe alternative to OB/OD because within five years, the shelf life of over 80,000

Acquisition Reqts — Versus — Demil Reqts

Environmental Statutes and Policies Tie Pieces Together

Tech Base (5 yrs old)

FIGURE 1.

Lawson is the assistant program manager at the Close Combat Anti Weapon System (CCAWS) Project Office, Tactical Missile PEO, Redstone Arsenal, Huntsville, Ala. He holds a bachelor's degree in engineering from Memphis State University and is a graduate of PMC 92-1, DSMC. Lawson started his civil service career in 1984 as an engineer in the Tube-Launched Optically Tracked Wire Guided Missile project office and has over 15 years' experience in the anti-tank missile acquisition field. He is Level III certified in program management; systems planning; research,development and engineering; and cost estimating. **Howell**, the program manager for ERC, Inc., Huntsville, Ala., is a graduate of the University of Southern Mississippi and holds a bachelor's degree in physics with 40 years of missile experience. He manages technical support services to the Redstone Technical Test Center, and is a recognized Test and Evaluation expert. He retired from AMCOM where he served as deputy Program Manager for a classified program.

FIGURE 2. TOW Missile Demilitarization Requirements

be leveraged to increase recovery revenues. This path has great management and revenue potentials that can be developed economically in the near-term for emerging requirements. Clearly, demilitarization activities must be aggressively managed to maximize force modernization acquisitions.
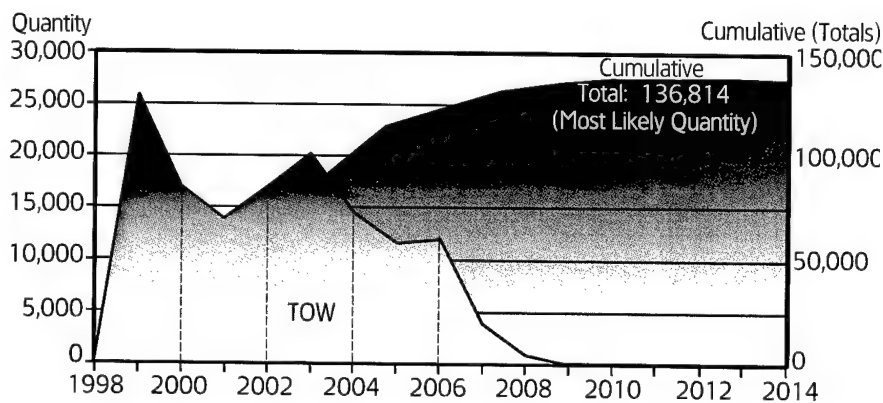
Tactical missile demilitarization presents a formidable task to manage within the next decade and must be executed with zeal as new acquisitions compete for resources. Currently, OB/OD is encumbered with environmental constraints.

U.S.-owned TOW missiles will expire with others soon following. Due to potential environmental liabilities and compliance to criteria established in the new Munitions Rule Implementation Policy, the cost to demilitarize the Army's TOW inventory will most likely approach $200 million. This is a worldwide problem because over 42 countries own TOW missiles.

The CCAWS project office developed discretionary initiatives (i.e., live fire training, or FMS "give aways") and incorporated Resource, Recovery, and Recycling (R3) technologies to reduce the cost to demilitarize TOW missiles. The discretionary initiatives can potentially reduce the quantity for demilitarization by approximately 10 to 20 percent. However, over 140,000 TOW missiles would remain. The R3 technologies can generate a revenue stream from the inherent value of energetics, electronics, and metallic components in the missile. Applying R3 technology will permit CCAWS to turn an unfunded bill into a revenue source.

Because of mature technologies that recover the high value of the energetics, TOW and Chaparral can now be demilitarized at a cost significantly less than OB/OD. We estimate the total cost for the TOW inventory to be less than $24 million with a significant portion contributed by industrial investments. These technologies have been sponsored by the Joint Ordnance Commanders Group and managed by Jim Wheeler, Defense Ammunition Center (DAC). The Department of Energy (DOE) recycling technology for electronics, plastics, and precious metals at Oak Ridge, Tenn., will

PMs' responsibilities truly encompass "cradle-to-grave" functions. The Close Combat Anti-Armor Weapon Systems (CCAWS) project office has recognized this challenge and developed a plan to reduce Tube-Launched Optically Tracked Wire-Guided (TOW) missile demilitarization cost — potentially to zero — with industrial partnerships.

$$D_{(mil)} = \left\{ Inv \right\} (-) \left\{ Tac_{(reqts)} \right\} (-) \left\{ Disc_{(init)} \right\}$$

where:

$D_{(mil)}$ = Demil Quantity

Inv = Inventory Quantity

$Tac_{(rqts)}$ = Tactical (+) Training (+) Engineering Base (+) Contingency Quantities

$Disc_{(init)}$ = Increased Training (+) FMS "Give Aways" (+) Parts Reuse (+) Contractor Sales Quantities

FIGURE 3. Demil Quantity Equation

5-YEAR EXPIRING MISSILE INVENTORY
ACTIVE/INACTIVE

MISSILE
DISPOSITION
FUNNEL

Increased Training Allotment

Alternative Applications

Parts Reutilization

FMS "Give Aways"

DEMIL

RECLAMATION   DESTRUCTION

MISSILE RECYCLING CENTER

OB/OD will remain as an alternate course of action that needs continuation for unsafe munitions. However, environmentally safe methods that reclaim valuable materials are the "smart" way to execute demilitarization of our aging missile stockpiles.

Time Is Running Out

During the next 10 years, the shelf life of approximately 140,000 of U.S.-owned TOW missiles will expire (Figure 2).

During FY98, the PEO Tactical Missiles and the Aviation and Missile Command's (AMCOM) Deputy for Systems Acquisition (DSA) jointly validated quantities for additional tactical missiles where requirements are excluded.

Program Manager's Initiatives

In May 1998, the PM formally chartered an Integrated Product Team (IPT) to formulate alternatives to minimize TOW demilitarization cost. The IPT is comprised of representatives of PEO Tactical Missiles; AMCOM's DSA; Missile Research, Development and Acquisition Center; DAC; Industrial Operation Command, including Anniston Army Depot (ANAD); and Test and Evaluation Command's Redstone Technical Test Center. The IPT recommended four courses of action: Minimize the quantity for de-

militarization, utilize the maturing R3 technologies, accelerate OB/OD for the legacy missiles, and continue technology-based investments.

Discretionary initiatives are system-unique. This process should begin at least five years prior to the mean shelf-life expiration of the missiles. To date, these discretionary initiatives have reduced the demilitarization quantity 10 to 20 percent for TOW.

Increased training allotments were estimated and coordinated with the tactical user, resulting in strong support for ad-

ditional live firings. However, training needs, range availability, and support cost put a limit on the quantity that could be effectively used. Consideration was given to other alternative applications and reductions were made. FMS "give aways" contributed to the quantity reduction by offering old missiles for training. After identifying requirements for the PM initiatives, residuals became candidates for demilitarization (Figures 3 and 4).

This is a very complicated process because typically missiles are dispersed to numerous depots with mixed production lots. This approach was effective for TOW; however, its utility must be evaluated for other systems.

Proposed Path Forward

Demilitarization offers two options: destruction by OB/OD or reclamation. Destruction by OB/OD totally consumes the inherent value and offers nothing to the cost-reduction objective. This approach contains numerous liabilities: Subsequent real estate reclamation to ensure compliance with the Clean Air Act, Clean Water Act, and Toxic Substance Control Act (Figure 5) far exceeds the cost to execute OB/OD. Conversely, reclamation may not be economical.

R3 offers a revenue stream from the sale of piece parts and energy sources after processing for military and industrial applications. The most economic process is the reclamation of energetics from the

Real Estate Reclamation Cost (Water, Soil, Air)

Subpart X Minimization Implications of RCRA Regulations on DEMIL
EPA Regional Permits

National Environmental Policy Act (NEPA)
Ammunition and Explosives Safety Standards
Clean Air Act (CAA)
Clean Water Act (CWA)
Resource Conservation and Recovery Act (RCRA)
Federal Facilities Compliance Act (FFCA)
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
Toxic Substances Control Act (TSCA)
Emergency Planning and Community Right-to-Know Act (EPCRA).\
Munitions Rule Implementation Policies (MRIP)

propellant and warhead compositions. The 1.3 class of energetic sources typically contains nitroglycerine and nitrocellulose, which are low-value and are not economically viable for R3 considerations. Such can be found in Shillelagh, Dragon, and Nike Hercules, thus the need for OB/OD continues. The high-value, 1.1 class of energetics found in rocket motors and warheads economically warrants recovery. Non-recurring investments are needed for TOW to effect the economics of recycling. TOW and Chaparral missiles were selected due to their age, quantity, and high-recovery value potential.

R3 technologies are being optimized for worldwide applications. The metal and automotive industries have already taken advantage of some of this technology by recycling to help recoup production losses. With its long-term history of recovering contaminated metals, DOE has established a pilot facility to recover precious metals and other products in the electronics industry, specifically to reclaim value of outdated personal computers (glass, metals, and plastics). Economics will mandate R3 activities in other industries as technologies are developed.

PEO Tactical Missiles and the DSA for AMCOM are proposing a missile recycling center at ANAD, consisting of four modules: disassembly, energetic recla-

mation, destruction, and processing (Figure 6). The missile will be delivered from the depot magazines to the disassembly module, where the high-value energetics and subsystems will be removed, segregated, and packaged to meet secondary market requirements. The energetics will then be shipped to the reclamation module. The warhead material (LX-14) will be separated, and the rocket motor propellant will be removed by dry machining or by ablation. These processes have been demonstrated as cost-effective, near-optimal techniques for recovery of energetics. A closed loop, liquid ammonia-based process will be used to extract and separate energetic ingredients. The destruction module will be used to expend squibs, safe and arm-

ing devices, and unsafe rocket motors. It also will contain an enclosed chamber such that unsafe warheads and explosive devices may be expended.

Recently, reclamation technology has shown some of its benefits by validating rocket motors and warheads. Upgrading the design of the pilot plant to an operational facility by using existing vessels and control equipment that exist in the chemical industry poses minimal risk. The engineering challenge will be to meet the throughput rate of 75 to 80 missiles per day (15,000 per year) for economic viability. The facility will be constructed with transportable modules and will accommodate emerging technologies. Technology is readily available

Tactical missile demilitarization presents a formidable task to manage within the next decade and must be executed with zeal as new acquisitions compete for resources.

for the TOW missile; however, no "silver-bullet" exists for all tactical missiles.

Policy/Legislative Change Needed
Non-recurring investments (comparable to OB/OD) are needed for TOW demilitarization to preclude environmental liabilities. Revenue from the sale of recovered items will further reduce demilitarization cost.

Changes to policy and legislation will be needed to enhance the marketing and receipts from sales of materials. PMs need a readily available avenue to manage the revenue streams that will be derived from the sale of recovered products and precious metals.

FIGURE 6 **Missile Recycling Center**

Cohen Outlines 1999 Update on Defense Reform, Releases "Partnering for Excellence" CD

In a press conference at the Pentagon today, Secretary of Defense William S. Cohen released a CD-ROM on progress in the Defense Reform Initiative, the ongoing program to apply key lessons from business and industry to make the Department of Defense and the military Services more efficient and productive. This CD-ROM, entitled Defense Reform: Partnering for Excellence, was produced by the Department of Defense to highlight the status of the reform initiative first unveiled in November 1997. It also features new initiatives undertaken in the past year and outlines future reform goals.

"The progress we have made in defense reform is a tribute to the thousands of men and women, military and civilian alike, who are committed to improving the efficiency and effectiveness of the Department of Defense," said Cohen.

Cohen noted that current reform efforts seek to coordinate and build on the four pillars of Defense Reform – elimination, reengineering, consolidation, and competition. The overall improvement program has expanded to now include reforms in acquisition, logistics, financial management, quality of life for DoD personnel, and new missions for the 21st century. Each of these elements is described in the CD. Cohen further stressed the continued commitment of the Department's senior leadership to follow through and institutionalize reform initiatives.

"This CD-ROM has been produced in the spirit of the new information age to communicate with the broadest audience. We need to inform, inspire, and educate all DoD employees throughout the world as well as our business partners, the Congress, and American citizens that we are serious about our goal of providing more efficient and effective support to the men and women in uniform," said Cohen. "Saving money through more modern, business-like operations is a key means of doing this," he added.

In addition to the disk, the information in this computer product is available on the Internet at the Defense Reform Web site at **www.defenselink.mil/dodreform**. Copies of the disk can be ordered from the comment page on the Web site.

DEFENSE REFORM

Government-wide Commercial Purchase Card

Description: The Government-wide Commercial Purchase Card is a commercial credit card issued to government employees for official purchases. Before DoD implemented the purchase card, buying supplies and services valued under $2,500 [was] labor- and paper-intensive, often requiring numerous approvals. This inefficient process could take weeks, even months, before employees received their order. Further, with literally millions of purchase orders every year, which cost $155 each, the old fashioned process was unnecessarily expensive. The Purchase Card substantially reduces these costs, while improving the responsiveness to the customer.

Status: Since FY 1997, the number of card transactions increased 47 percent, while the number of purchase orders issued decreased by 43 percent. Today, over 160,000 civilian employees and uniformed members use the card.

In FY 1998, the number of card contract actions ($2,500 and below) increased from 72 to 86 percent.

Card use in the first quarter of FY 1999 is 25 percent higher compared to the same period last year.

Next Steps: Working with the two banks that support the Purchase Card, DoD plans to further streamline the purchasing process by providing program administrators, supervisors, and cardholders with "real time" access to their accounts from anywhere in the world. The electronic transmission and receipt

of data will eliminate manual data entry and the associated resources required.

By the summer of 1999, DoD will perform all Purchase Card program administration with banks via the World Wide Web.

By the fall of 1999, DoD will have an electronic interface with the banks supporting the card. This will allow accounting data associated with card use to flow automatically from the banks into DoD accounting systems. Currently, card accounting data from the bank is manually entered, via paper, into DoD's accounting systems.

Electronic Commerce

Description: The Department's business affairs are paper-intensive and therefore people-intensive, expensive, and slow. The DoD objective is to rapidly transition to Electronic Commerce (EC), which will reduce overhead costs and create a customer-friendly interface for private enterprises, including small businesses, that heretofore have found it difficult and expensive to do business with DoD. As technology evolves, all DoD organizations must integrate electronic commerce tools into [their] business and management practices.

This past year the Joint Electronic Commerce Program Office (JECPO) was established to develop a roadmap to facilitate this transition. JECPO's creation marked the Department's commitment to integrating EC technology into every facet of DoD business, using modern and widely accessible technology. JECPO has excelled in its efforts to establish a robust EC infrastructure, thereby allowing the promotion of Internet-based business tools. Its successes have been encouraging and are a testimony to the cooperation that organization has received from within the Department and from industry. Momentum has clearly been established.

Under JECPO's direction, the DoD Electronic-Mall (E-Mall) began with the expansion of the Defense Logistics Agency's E-Mall and now provides one-stop shopping from all DoD electronic and commercial catalogs.

A premier accomplishment of the JECPO is its support of DoD Paperless Contracting (PC). Under the Defense Reform Initiative, all aspects of the contracting process for major weapons systems are scheduled to be paperless by the year 2000.

To facilitate electronic payment and eliminate redundancy in the process of industry registry, JECPO created the Central Contractor Registry (CCR). The CCR is a central database containing DoD industry partners' procurement and financial information.

JECPO plays an important role in another DRI success story: streamlining the contracting process through the Government-wide Commercial Purchase Card. DoD's goal is to have 90 percent of all DoD purchases under $2,500 made via the purchase card.

DoD Electronic Mall (DoD E-Mall)

Description: The DoD E-Mall, which was initiated in January 1998, is an Internet-based system providing "one stop shopping" for the DoD warfighter to quickly and easily locate and order items from commercial electronic catalogs. This system eliminates the traditional labor-intensive process of identifying sources of supply and provides easy access to a wide range of information on commercial products. The E-Mall enables direct orders from industry using the Government Purchase Card and streamlines the procurement process. Multiple supply sources are available from a single search engine allowing consolidated ordering. The purchaser can now easily compare all ordering options and make a decision based on the best overall value.

Status: Currently there are 19 catalog vendors offering 300,000 electronic and hardware products, as well as two million products from Defense Logistics Agency. These include, for example, clothing and textile items from Defense Supply Center Philadelphia's catalog, and computer hardware and software from the Navy's direct electronic catalog.

From August 1998 to December 1998: Site hits increased from 35,000 to over 70,000, DoD E-Mall registrants increased from 243 to 635, ordering sessions increased from 3,800 to 7,500, and sales increased from $14.3 million to $19.6 million.

Next Steps: In March 1999, the Joint Electronic Program Office will publish a schedule for integrating existing service catalogs into the E-mall.

In April 1999: Customers will be able to order customized items from commercial manufacturers, tank-automotive and armaments commands will integrate their items in the E-mall, and the E-mall Web interface will request shipping addresses from current and potential users, enabling vendors to have regional pricing/delivery in their catalogs by the summer of 1999.

In June 1999: Twelve commercial catalogs will be added, expanding the range of items available in the E-Mall, E-mall users will be able to order items through the GSA Advantage Web Ordering System, and a pilot program for integrating Foreign Military Sales into the E-Mall will be established.

Prime Vendor Program

Description: Drawing on the innovation and experience of American industry, the Department has adopted an entirely new approach to the procurement of readily available items, such as pharmaceuticals and food products. In the past, DoD would buy huge stocks of medical supplies and stockpile items at individual hospitals, clinics, and government warehouses. These stockpiles wasted Department funds on storage and holding costs. Beginning in FY 1993, the Department began the Prime Vendor Program, which allows vendors to make direct deliveries to DoD customers. This program is cutting warehousing costs by virtually eliminating the need to maintain stocks. It also meets customer needs by quickly providing items that have discounted commercial prices.

The DRI expanded the Prime Vendor Program in November 1997 to facility maintenance activities. This allows installations to order maintenance, repair, and operations (MRO) supplies directly from integrated supply chain contractors. Examples of MRO items include general construction materials, hardware, paint, tools, and plumbing and electrical items.

Status: In June 1998, six months ahead of schedule, the Defense Logistics Agency (DLA) awarded the regional contracts that provided nationwide MRO contract coverage.

In November 1997, DLA identified 246 potential military installations for participation in the program (those with facilities maintenance budgets in excess of $500,000). To date, 53 installations are participating and an additional 35 installations will enter the program shortly.

Amount of sales by MRO Prime Vendors: FY 1997 – $1.7 million; FY 1998 – $18 million, a tenfold increase.

Next Steps: DLA will continue to aggressively market the Prime Vendor MRO program to increase the number of participating installations.

Paperless Contracting Process

Description: Today, paper is at the core of DoD's essential business systems and culture. The DRI embraces a goal of making all contracting (i.e., weapons systems, spare parts, and installation-level maintenance) paperless by the turn of the century, which means eliminating paper from all major phases of the DoD contracting process. This would include requirements processing, contractor selection, and almost every step of executing contract writing, administration, payment, accounting, auditing, reconciliation, and closeout.

Status: Progress is being measured in the major and most paper-intensive phases of the contracting process:

- Forms detailing Service/Item Contract Requirements

- Solicitations to Industries for Goods or Services

- Awards and Modifications to Contracts and Delivery Orders

- Invoices for Services/Goods Delivered, and Government Payments or "Checks"

- Final Review of Compliance for Contract Closeout

1st Quarter Goal
Requirements: FY 1997, 70 percent; FY 1998, 83 percent; FY 1999, 91 percent; FY 2000, 90 percent
Solicitations: FY 1997, 49 percent; FY 1998, 58 percent; FY 1999, 77 percent; FY 2000, 90 percent

Awards/Modifications: FY 1997, 21 percent; FY 1998, 47 percent; FY 1999, 69 percent; FY 2000, 90 percent

Receipt/Acceptances: FY 1997, 10 percent; FY 1998, 26 percent; FY 1999, 64 percent; FY 2000, 90 percent

Invoices/ Payments: FY 1997, 10 percent; FY 1998, 28 percent; FY 1999, 39 percent; FY 2000, 90 percent

Contract Closeout: FY 1997, 41 percent; FY 1998, 63 percent; FY 1999, 80 percent; FY 2000, 90 percent

Next Steps: In May 1999, provide additional security to paperless operations by installing public key encryption and digital-signature technology. This will protect sensitive information from unauthorized disclosure and ensure the confidentiality and integrity of electronic signatures.

In June 1999, make electronic documents available to private industry for incorporation into [their] contracting systems.

In August 1999, begin implementing Wide Area Workflow, a Web-based software application, which will allow the receipts/acceptances to be entirely processed electronically.

In August 1999, complete deployment of electronic document access for paperless contracts and modifications.

By December 1999, make available the majority of DoD solicitations via the DoD New Business Opportunities Web Page.

Competitive Sourcing Program (A-76 Program)
Description: Competition, the driving force in the American economy, forces organizations to improve quality, reduce costs, and focus on customers' needs. Competition offers these same benefits to DoD. Our forces require support in a number of areas: maintaining buildings, repairing equipment, and preparing checks. DoD employees perform many of these commercial activities. Often there is no reason why this work cannot be performed by the private sector. As a result, the Department is increasing the number of commercial functions performed by DoD employees for competition.

Background: From FY 1979 to FY 1996, functions involving nearly 90,000 positions were competed. As a result, of these competitions, the Department now saves $1.5 billion a year. Competition has reduced annual operating costs of the functions involved by about 30 percent.

In November 1997, DoD announced a goal of competing functions involving 150,000 positions between FY 1997 through FY 03 under the A-76 process. DoD will exceed that objective. The FY 2000 budget now provides for the competition of nearly 229,000 positions between FY 1997 and FY 2005, resulting in cumulative savings of $11.2 billion and steady savings of $3.4 billion starting in FY 2005.

Status Since the Release of the DRI (Nov. 10, 1997):
In FY 1997, the number of positions competed under the A-76 process was just over 26,000.

In FY 1998, nearly 34,000 positions were competed, an increase of 31 percent from FY 1997.

In FY 1999, DoD plans to compete nearly 52,000 positions, an increase of 100 percent from FY 1997.

In FY 2000, DoD plans to compete over 53,000 positions, an increase of 104 percent from FY 1997.

In FY 2001, DoD plans to compete over 48,000 positions, an increase of 85 percent from FY 1997.

Central Contractor Registration
Description: The Central Contractor Registration (CCR) allows vendors to register once with DoD simply by accessing an Internet-based registry. Previously, a vendor who wanted to do business across the Department had to submit mailing list applications to as many as 800 different contracting offices. The CCR now affords vendors a single point of registry that gives them visibility across all relevant offices. By reducing time and labor costs, the CCR also makes it easier for small companies to do business with DoD, which encourages competition and lowers prices.

Status: Processing of registrations has been cut from 30 days to 48 hours or less.

The number of companies registered to do business with DoD increased from 20,000 in November 1997 to over 135,000 in February 1999.
DoD currently pays 90 percent of DoD contract vendors payments by Electronic Funds Transfer (EFT) using CCR data.

Next Steps: During FY 1999, the CCR will expand to allow DoD users and other government agencies access to the CCR database. As a result, they will be able to query the database for specific industry and vendor data.

During FY 1999, CCR will become interoperable with DoD's major contracting systems, allowing DoD users to get past performance data on CCR registrants.

Taking Advantage of Cyberspace

Description: Information technology (IT) affects almost every aspect of the Department of Defense, from tactical units to the supply lines that support them. It is critical to our ability to collect, process, and disseminate a steady flow of information, which gives the United States an advantage over its adversaries. It also provides faster and more effective logistics, personnel, finance, health, and business processes. The Department realizes that its reliance on information technology, however, constitutes an attractive target for America's adversaries. In response, the Department is moving aggressively to protect its information infrastructure and ensure the continuous availability, integrity, authentication, confidentiality, and non-repudiation of its information.

Status: In January 1998, DoD established the Defense-wide Information Assurance Program (DIAP), which provides a common management framework and central oversight to protect the Defense Information Infrastructure.

DoD has taken several measures to assess the Department's information-security vulnerabilities and to identify and protect against cyberattacks. These include:

In June 1998, creation of a Computer Forensics Lab to support and train the Military Departments in identifying and analyzing cyberattacks.

In September 1998, issuance of new guidelines for posting information on DoD Web sites to ensure that such information does not present security risks.

In December 1998, creation of a Joint Task Force on Computer Network Defense (JTF CND) to monitor DoD computer networks and react quickly to indications of unauthorized penetration of DoD systems. The JTF CND should be fully operational by July 1999.

In March 1999, creation of a Joint Web Risk Assessment Cell, led by the Defense Information and Systems Agency, and comprised of reservists that will conduct security and threat assessments of DoD components' Web sites.

OSD Personnel Downsizing

Description: The DRI commits the secretary to reduce the Office of the Secretary of Defense staff from 3,000 to 2,000 by the end of FY 1999. The baseline for reduction is FY 1996 and includes direct staff elements of OSD, as well as Defense Support Activities personnel that effectively work for the OSD but traditionally have been attributed to other elements of the Department.

Status Since the Release of the DRI (Nov. 10, 1997):

With more than seven months remaining before the end of FY 1999, 93 percent of the total reduction has been completed. Of the 922 reductions accomplished to date, 566 were transfers and 356 were outright eliminations. A career transition assistance office was established in February 1998 to provide OSD personnel with counseling and other help in locating and securing job opportunities elsewhere in government as well as in the private sector. As a result, involuntary Reduction-in-Force (RIF) separations have been avoided. On average, more than 100 people use the office's resources each month. To date, 38 people were directly placed in jobs outside of OSD.

Next Steps: OSD is on-track to complete the remaining 82 reductions (13 transfers and 69 eliminations) by the end of FY 1999.

Editor's Note: This information is in the public domain at **www.defenselink.mil/news** on the World Wide Web.

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THE DEFENSE SYSTEMS MANAGEMENT COLLEGE
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Secretary Cohen, Deputy Secretary Hamre Publish Defense Reform Update 1999

Elements for a 21st Century Acquisition System and Competitive Workforce

To build a 21st century military capable of meeting 21st century missions, we must equip our Armed Forces with the latest technologies and tools. This, in turn, requires an acquisition system that provides our forces with the highest quality goods in the most affordable and efficient fashion possible. To that end, Secretary Cohen envisions a reengineered acquisition system that focuses on:

- Managing suppliers, rather than supplies
- Providing high-quality support with fewer organizations based on tough performance parameters
- Ensuring the public's trust and confidence in DoD

While reducing the acquisition workforce by over 45 percent since Fiscal Year 1989, the Department of Defense has also reengineered a number of processes and undertaken a series of initiatives to provide the best-value systems, goods, and services.

These initiatives span three critical areas: Reengineering the Infrastructure; Improving the Acquisition Process; and Enhancing Acquisition Workforce Education and Training.

Streamlining RDT&E Infrastructure

The Department of Defense has been streamlining our research, development, test, and evaluation infrastructure for several years. But, Joint Vision 2010, the Department's conceptual template for joint warfighting, depends on our abil-

Joint Vision 2010, the Department's conceptual template for joint warfighting, depends on our ability to leverage new and emerging technologies at a reduced infrastructure cost.

ity to leverage new and emerging technologies at a reduced infrastructure cost.

We've accomplished this by cross-servicing and co-locating certain functions. At the same time, DoD's industrial partnerships have demonstrated leadership in areas key to our warfighting capabilities, such as information technology.

In order to maintain the technical superiority of our Armed Forces while reducing infrastructure cost, DoD will rely more and more on competitive sourcing for the technology we need.

We will publish an implementation plan exploring ways to further streamline our research, development, test, and evaluation infrastructure. The plan will identify the best place for work to be performed, and allow DoD to continue harnessing leading-edge technologies on behalf of the warfighter.

Improving the Acquisition Process

The Department of Defense must meet the challenge of providing America's military with systems, goods, and services in a manner [that] is better, faster, and cheaper.

To achieve this objective, we must access commercial technology and adopt business practices characteristic of world-class suppliers. But with current budget restrictions, we must also reduce the total cost of acquiring and operating the systems we purchase. It's critical, then, to maintain a competitive environment and an acquisition process that is attractive to potential industrial partners.

New defense reform initiatives are designed to reengineer and improve our acquisition process. One such initiative, actually a set of initiatives, is Civil Military Integration, or CMI. The aim of CMI is to enhance our access to world-class suppliers by applying best commercial business practices, while removing barriers at all stages of the acquisition process [that] prevent the Department from accessing commercial technology and products.

In addition, we must incentivize industry to merge their civil and military facilities and practices. Implementation of CMI initiatives will leverage access to leading-edge technologies and practices.

The Single Process Initiative, or SPI, has helped us move toward the goals of Civil Military Integration. Through SPI, we can convert existing contracts at a facility to a contractor's common process. To date, we've converted hundreds of contracts.

SPI has saved DoD nearly $500 million. At the same time, it has promoted industry consolidation, plant modernization, and subcontractor reform.

To eliminate the remaining barriers to Civil Military Integration, DoD is developing a package of reform proposals and initiatives. This package is designed to improve our ability to reach technology and other providers who currently will not engage with DoD, particularly in the crucial research and development arena.

Removing barriers to commercial technology through CMI is only one initiative targeted at improving the acquisition process. Another initiative, one that focuses on cost reduction, is designed to reduce the total ownership cost of weapons systems.

Cost As An Independent Variable, or CAIV, is a continuous, user-oriented, overarching acquisition strategy. With this strategy, we trade off performance requirements against affordable costs to maximize value to the warfighter.

But our costs are still too high. While continuing to attack acquisition costs, we need to reduce logistics support cost as well. As the Performance Scorecard for Logistics Cost Reduction shows, in 1997 our logistics costs were about $83 billion. To date, our costs have dropped to approximately $80 billion. By 2005, we hope to reduce costs to about $66 billion. That's a 20-percent reduction from our 1997 costs. We will achieve this reduction by streamlining our infrastructure, reengineering logistics processes, and increasing the reliability and maintainability of systems.

The Department is committed to reducing the cost of delivering support through smart and aggressive process reengineering. Through initiatives such [as] these, we reduce costs and improve our readiness.

Enhancing Acquisition Workforce, Education, And Training

Reform of the acquisition process requires a skilled workforce. In fact, our ability to provide our warfighters with the equipment they need — at an affordable price — rests with the quality of the acquisition workforce.

The Department of Defense is targeting the training and education of the acquisition workforce in several areas, including: enhancing basic skill training; institutionalizing continuous learning; teaching the concepts of the commercial business environment; recruiting, developing, and retaining technology leaders; and managing the acquisition workforce.

Under the Defense Acquisition Workforce Improvement Act, DoD provides acquisition personnel with the skills and knowledge they need to function in a rapidly changing environment, and to understand commercial practices necessary for increasing system performance and lowering costs.

As a result of that Act, the Defense Acquisition University (DAU) now educates approximately 35,000 acquisition personnel each year. DAU has 81 courses, all of which incorporate DoD's acquisition reform initiatives.

> We must access commercial technology and adopt business practices characteristic of world-class suppliers.

> The Department is committed to institutionalizing continuous high-quality education and training for the acquisition community.

The University is taking advantage of new distributed learning technologies to modernize the DAU curriculum. The Performance Scorecard for Courses Enhanced by Technology shows that in 1997 10 percent of the DAU curriculum was modernized and delivered by distributed learning technologies, like the Internet and CD-ROM.

The goal is to have 25 percent of the courses modernized by the end of fiscal year 1999. And by 2003, DAU plans to complete the modernization of all its courses through technology enhancements.

Using new technologies we can reduce training time, train across functions, and significantly reduce costs. It's not enough to train our workers in basic job skills ... we must be sure they maintain the high-level skills and knowledge they need in today's changing acquisition environment. Consequently, the Department is committed to institutionalizing continuous high-quality education and training for the acquisition community.

To meet this need, the Department is deploying training for our acquisition workforce through a continuous learning program. As the Performance Scorecard for Continuing Education shows, in 1997 20,000 acquisition personnel participated in an average of 40 hours of continuing education. In 1999, we expect that number to increase to 80,000.

Our policy is to provide all acquisition professionals with an average of 40 hours per year of continuing education by the year 2000. This will raise the performance levels of our workforce to meet the challenges of the future, implement acquisition reform, and protect the public trust.

In addition to enhancing the educational and training offerings within DoD, future efforts will include access to appropriate courses at top business and other academic institutions, as well as innovative training and educational partnerships with the private sector. For instance, in December 1998 an online pilot course was initiated by a partnership with two associations.

The Department has also launched a commercial business environment training program for senior managers with the University of Virginia's Darden School of Business. And, an integrated implementation plan for commercial business training will be published this spring.

Also, as the Department adopts the commercial practice of purchasing services instead of supplies, we are training our workforce to structure acquisitions more effectively and acquire performance-based service.

In the future, essential acquisition expertise may well reside in industry or academia. This is particularly true in fields where technology changes rapidly.

Unfortunately, the rules and regulations that make it difficult for senior DoD managers to pursue employment in the private sector when they leave the government, also make it extremely difficult for DoD to bring individuals from the private sector into the Department. As a result, we are evaluating policies that would permit a more mobile government-industry workforce, one that would continually refresh technology and management skills and provide incentives to maintain those skills in a smaller workforce.

One way to retain the best personnel is to implement human resources policies that benefit both DoD and our employees. With this in mind, the Department is preparing to implement an Acquisition Workforce Demonstration Project designed to enhance the quality, professionalism, and management of the workforce.

Specifically, the Demonstration Project will evaluate new systems of payment and reward, more streamlined hiring systems, delegation of classification authority to managers, avenues for employee education and training, and the need for sabbaticals. This demonstration project will help DoD identify critical personnel and work to meet their needs.

Through measures like these, we continue to give our acquisition workforce the skills necessary to face the challenges of the 21st century.

JDAMS – More Bang For the Buck

WASHINGTON (AFPN) -- Joint Direct Attack Munitions are the shining stars of Air Force acquisition Lightning Bolt programs, according to Darleen A. Druyun, Principal Deputy Assistant Secretary of the Air Force for Acquisition and Management.

Lightning Bolts took shape in 1995 as the linchpin of the Air Force's drive to acquire systems faster, better, and cheaper. Since then, Druyun said, Lightning Bolt reforms have "touched off an unprecedented blaze of reform."

To date, the Air Force has tallied more than $30 billion in savings under the Lightning Bolt program. The biggest cost reduction has been almost $3 billion slashed off the JDAM program over the last four years.

The Department of Defense designed JDAM in 1993 with an estimated price tag of more than $42,000 per copy. Two years later, the Air Force applied newly approved Lightning Bolt streamlined acquisition reforms, and the results, Druyun said, were dramatic.

The reforms reduced JDAM production time for 80,000 munitions from 15 years to 11 years, slashed special military specifications from 87 to zero, and shrank the statement of work from 137 pages to only two.

Even more savings resulted when the Air Force reduced contract data requirements from 146 to 22, cut back the program office from 80 people to 36, and increased the warranty period from five years to 20.

Taken together, the reforms reduced the JDAM unit price to less than $15,000 per copy. Multiplied by more than 80,000 units delivered to the Air Force and Navy, the government has saved $2.9 billion.

Editor's Note: This information is in the public domain at **http://www.af.mil/news/** on the World Wide Web.

David D. Acker Library

DSMC's Own Repository of
Defense Systems Acquisition Management
Information and Reference Services

For Helen Haltzel, the director of DSMC's Acker Library, coordinating National Library Week is a labor of love. Says Haltzel, "I find it very satisfying to be part of the exciting technological revolution that is transforming libraries. Thanks to computers and the Internet, today's libraries are able to provide both global reach and in-depth retrieval on a scale never before possible. National Library Week is an opportunity for us to broadcast that message."

A career librarian who holds two master's degrees — one in Soviet Studies from Harvard University and another in Library and Information Science from the State University of New York — Haltzel came to DSMC in 1985 as a cataloguer. Since then, she and her staff have seen the library grow from a modest collection, to what many would argue is the finest defense systems acquisition management collection of books, newspapers, journals, microfilm, and CD-ROM publications in the world.

Providing information and reference services to staff, faculty, and more than 10,000 students a year, the library also provides online access to other technical information centers and gateways. A reading room, study area, and computers with Internet access also provide a setting conducive to learning, relaxing, "surfing" the net, or simply reading for pleasure. National Library Week presented Haltzel and her staff an oppor-

tunity to not only showcase the library's collection, but also perform database demonstrations throughout the week.

A Tradition Since 1958

In the mid-1950s, research showed that Americans were spending less on books and more on radios, televisions, and musical instruments. Concerned that Americans were reading less, the American Library Association (ALA) and the American Book Publishers formed a nonprofit citizens organization called the National Book Committee in 1954.

The committee's goals were ambitious. They ranged from "encouraging people to read in their increasing leisure time" to "improving incomes and health" and "developing a strong and happy family life." In 1957, the committee developed a plan for National Library Week based on the idea that once people were mo-

I live for books.

—Thomas Jefferson

Accessing Acker Library and Its Resources

Acker Library supports mainly the staff and faculty and students of the Defense Systems Management College, but is widely used by researchers in defense acquisition and reform. We welcome visitors to use the collection; however, full borrowing privileges are restricted to current DSMC faculty, staff, and students. DSMC alumni may use the library and register for weekend borrowing privileges. Hours of operation are 0630–1730, Monday through Friday, and we are closed on federal holidays.

Program Office staff and others in the acquisition community are also welcome to use the library materials onsite. For materials needed for a longer period of time, interlibrary loans can be arranged through your own technical library.

Acker Library's catalog is available on the Internet at **http://library.dsmc.dsm.mil/**. The David D. Acker Library Home Page not only provides access to the catalog but also

guides users to additional Net-based resources and information important to the acquisition community. Our annotated Webpicks list leads users to frequently used Web sites that include comprehensive business and government sites as well as the more familiar military sites.

Hotlinks to other repositories of information are also listed. These include the following: Air University Library Index to Military Periodicals (AULIMP); *Commerce Business Daily*; Defense Technical Information Center (DTIC) (technical reports); Government Printing Office; Library of Congress; MERLN (Military Education and Research Library Network); Pentagon Library; and THOMAS (Library of Congress web site for legislative information).

Connections to commercial databases are also found on our home page. These can only be accessed from the DSMC main campus: Britannica Online, CCH Government Contracts Service, First Search (pe-

riodicals), ProQuest Direct (for business periodicals, *Wall Street Journal, Washington Post*, and Standard & Poors.

Instructional tutorials can assist you in finding information in Acker Library and on the Internet. The following tutorials are currently available both on the Web and as printed handouts: CCH Government Contracts Service; Defense Acquisition Deskbook; Directives, Instructions and Regulations; Early Bird; OCLC FirstSearch; Periodical Articles and Indexes; Standard & Poor's NetAdvantage; and information on using the World Wide Web (finding information, terminology, using search engines, and using Netscape).

For additional information about Acker Library and its resources, contact the Reference Desk at (703) 805-4551, or visit the virtual library at **http://library.dsmc. dsm.mil/**. If you haven't discovered us, try our main DSMC Home Page at **http:// www.dsmc.dsm.mil/**.
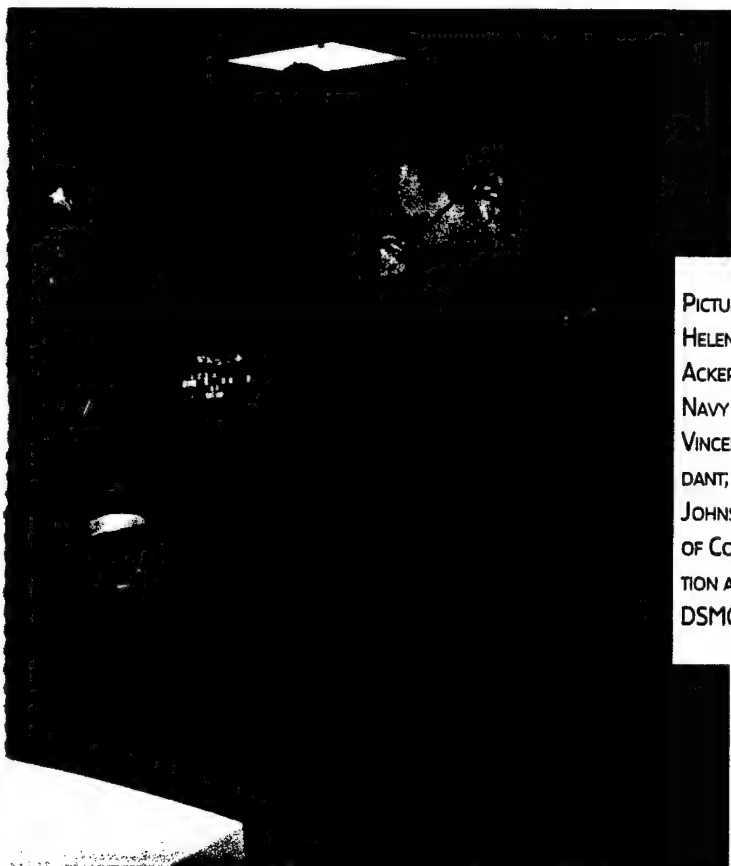
PICTURED FROM LEFT: HELEN HALTZEL, DIRECTOR, ACKER LIBRARY, DSMC; NAVY REAR ADM. LENN VINCENT, DSMC COMMANDANT; ARMY COL. JOSEPH JOHNSON, DEAN, DIVISION OF COLLEGE ADMINISTRATION AND SERVICES, DSMC.

tivated to read, they would support and use libraries.

With the cooperation of ALA through local and state committees, and with help from the Advertising Council, the first National Library Week was observed in 1958. National Library Week is now a national observance for libraries across the country each April. It is a time to celebrate the contributions of our nation's libraries and librarians and to promote library use and support. All types of libraries — school, public, academic, federal, state, and special — participate.

The Public Information Office of the American Library Association coordinates the promotion, placing articles and public service advertisements in national media. The President of the United States issues an annual proclamation. Librarians, friends, and trustees of libraries join in sponsoring local promotions.

Their message: *"Wake Up and Read!"*

Army on Track With Y2K Bug

SGT. 1ST CLASS CONNIE E. DICKEY

WASHINGTON — With 90 percent of both nonmission and mission-critical systems Y2K-compliant, Army officials are confident the millennium bug will not give them any major problems come Jan. 1, 2000.

"We have only a small number of systems yet to become Y2K-compliant, and most of them will be completed by September. Overall, the Army is on schedule," said Miriam Browning, Director of Information Management in the Office of the Director for Information Systems for C4 (Command, Control, Communications and Computers).

She emphasized that included active Army, National Guard, and Reserve. "We will be monitoring the remaining systems closely," but she said, "soldiers should be confident that their weapon systems and computers will work as designed in the year 2000."

In addition, Browning said the computers operated by Defense Finance and Accounting Service have been certified Y2K-compliant, so soldiers, civilians, and contractors need not worry — their checks will be there after Dec. 31.

The Department of the Army has been working the Y2K issue since 1996, Browning said, and developed a DA Y2K Action Plan, which breaks down the approach to the Y2K problem into five phases: awareness, assessment, renovation, validation, and implementation. Most Army systems have completed the implementation phase and are participating in an additional series of integration tests with the Joint CINCs and across Department of Defense functional areas such as finance, personnel, logistics, intelligence, communications, and medical. The purpose of these integration tests is to assure Army systems can operate with other Army and DoD systems successfully in a Y2K environment, Browning said.

Operation Order 99-01 (Millennium Passage) is the Army's Y2K strategic test plan. It outlines the operational threads, systems, and communications equipment to be tested at division, corps, and separate brigades. Army Y2K tests have been conducted at Forts Bliss, Bragg, Drum, and Hood on major tactical systems. Y2K tests at remaining units will be conducted throughout the spring and summer. Army units will be participating in upcoming Y2K test events in Europe and Korea.

Test results to date have been positive, Browning said, with no known instances of any major Y2K or operational failures. Minor incidents such as finding out that a vendor's supposedly Y2K-compliant equipment or software is not Y2K-compliant can usually be fixed within a reasonable amount of time. "Testing is a Y2K real risk reducer," Browning said.

The Y2K problem exists because of the widespread practice of using the last two digits of a year in computer databases, software applications, and hardware chips. If not fixed, com-

puters will not recognize 00 as 2000, but instead will either read the date as 1900 or fail to respond.

Browning said hardware fixes are easier to handle because typically new chips or computers can simply be bought to replace older ones. Software fixes are a bit more complicated because they involve more date incidences to fix and the production of tailored software coding. Embedded microprocessors are also being reviewed for replacement or software fixes, she said. These embedded chips are found in weapon systems and on installation facility devices such as intrusion detection systems for ammunition storage areas.

In addition to systems' Y2K compliance, installation Y2K readiness is also on the Army's critical path for Y2K. Browning said that each major command has Y2K review teams that have visited installation sites to assure Y2K compliance. "The results are very good overall. Most facility infrastructures such as security, safety, and mission systems are fixed, and the remaining ones should be completed by June 1999."

As a worst-case scenario, the Army also has in place contingency plans to minimize Y2K impacts and disruptions. There are two types of contingency plans. The first are system contingency plans and are required for every Army system. They take into account actions and procedures to use should the system not work. The second type are operational contingency plans. These are connected to the Army's Continuity of Operations Plans and assure that Y2K is covered as part of a unit's mission contingency plans.

Browning said installations also have a requirement to put in place contingency plans. The Fort Eustis, Va., contingency plan is being used as a model for other Army installations.

In the process of fixing Y2K at their installations, commanders are encouraged, Browning said, to outreach to their local communities and work with them on helping to fix Y2K problems. She said a recent message from the Deputy Secretary of Defense issued general priorities for DoD Y2K support to civil authorities.

Browning summarized the Y2K situation. "The Army is in good shape regarding Y2K. However, it is the responsibility of all of us in the Army, especially leaders, to make sure Y2K bugs are uncovered and fixed. If in doubt, ask and fix. It is easier to do this today than January 1, 2000. Our warfighting mission cannot be compromised."

More information on Y2K can be found at several Web sites:
- **http://www.army.mil/army-y2k/Home.html**
- **http://www.hqda.army.mil/acsimweb/ops/y2k.htm**
- **http://www.y2k.gov**.

Editor's Note: This information is in the public domain at **http://www.dtic.mil/armylink/news** on the World Wide Web.

NASA Astronaut Turns Attention to Acquisition Workforce

From Early Age, Navy Commander Knows What She Wants Out of Life

C. TYLER JONES

At 10:56 p.m. on July 20, 1969, a 10-year-old girl's life was forever changed when she came face to face with her destiny. Like most Americans, Wendy Lawrence sat with her eyes glued to the television watching as Neil Armstrong walked on the moon and proclaimed, "One small step for man, one giant leap for mankind." That one step captured Lawrence's imagination and it became her dream to one day walk in Armstrong's shoes.

With a focus and determination rarely seen in someone so young, the 10-year-old Lawrence devoted herself to becoming an astronaut. She turned to her father, now retired Navy Vice Admiral William P. Lawrence, for advice on what path she should follow to achieve her dream. The elder Lawrence, who was ruled out as one of the first seven astronauts because of a heart murmur, told his daughter to try and follow in the footsteps of current astronauts.

On the Right Path

As a woman, Lawrence knew she had her work cut out for her. It was during her junior year at Fort

> "You must believe in yourself. You might not achieve your dreams, but you can try. And the road along the way is well worth taking."

Jones is editor, Program Manager *magazine. He received a degree in Communications Studies from the University of North Carolina-Chapel Hill and was the 1997 Military District of Washington photojournalist of the year.*

NASA photo
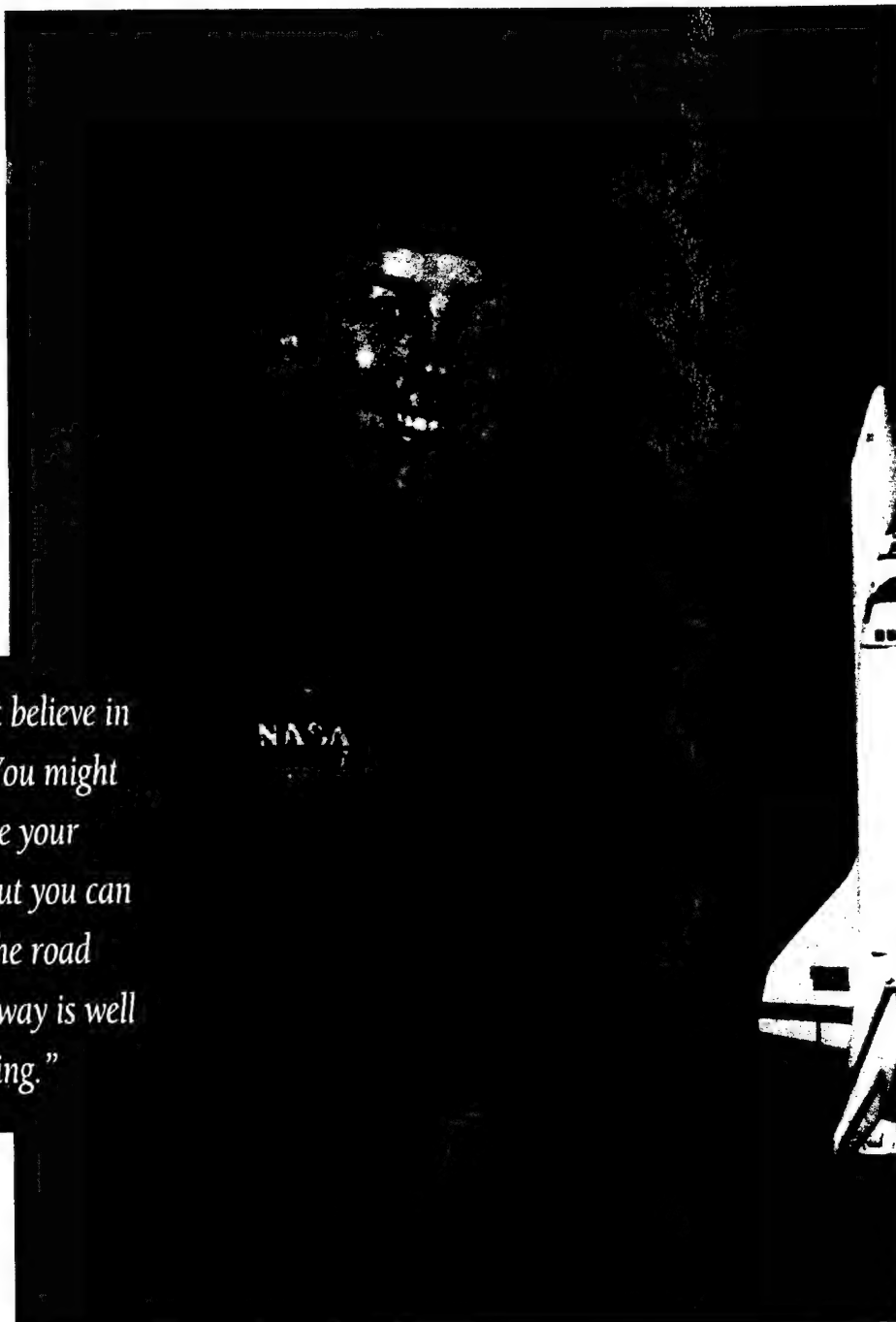
Hunt High School in Alexandria, Va., that the pieces started falling into place when the U.S. Naval Academy opened its doors to women. Once accepted she knew she was on the right path. She explained that 40 percent of astronauts are active-duty military. Like her father and grandfather, she graduated from the academy and became a naval aviator.

With more than 1,500 hours of flight time in six different types of helicopters, the distinguished flight-school graduate has made more than 800 shipboard landings in her Navy career. Lawrence said few things – space flight being one of them – compare to the adrenaline rush she gets when landing on a ship at night.

During her first 10 years in the Navy, Lawrence worked hard to be a good officer while striving to meet criteria NASA requires of astronaut candidates. In 1991, she submitted her astronaut packet up the Navy chain of command and in August of 1992 she was selected as a candidate and sent to Johnson Space Center in Houston, Texas.

A Dream Recognized

After 15 months of training, Lawrence was officially an astronaut, which meant she was qualified for assignment as a mission specialist on future space-shuttle missions. Her first mission, STS-67, came March 2, 1995.

Looking out the window at "the beautiful planet," Lawrence said she was overcome with emotion. After 25 years of dreaming of space flight, she had finally achieved her dream. She explained that the moment was short lived because she knew she had a mission to accomplish. When Lawrence returned to Earth 16 days later, she said she felt like her body was made of concrete.

Lawrence's next two missions involved flights to the Russian Space Station Mir. In September 1996 she began training at the Gagarin Cosmonaut Training Center in Star City, Russia, for a four-month mission to Mir. But destiny intervened when a re-supply rocket hit the space station, damaging the Spektr module.

An astronaut who could fit into a Russian cosmonaut uniform was needed to be able to do space walks to repair the damage; Lawrence was replaced by her backup, Dr. David Wolf. Always the team player, Lawrence accepted the setback and focused on helping Wolf get ready for the mission. She went so far as setting up many of his experiments once they docked with the space station.

Because of her ability to speak Russian and also to help make up for replacing her on the Mir mission, NASA assigned Lawrence as a crew member aboard the last shuttle flight, STS-91, to dock with the space station.

Lawrence said she has many fond memories of her time in space. She explained how one night she was able to identify San Diego, Los Angeles, and San Francisco all at once by their lights. Minutes later, she was able to pick out other cities as the Earth continued its rotation.

What makes looking down at Earth from the heavens most meaningful, Lawrence said, is whom she does it with. She said she has flown with three great crews, and developed a special relationship – a close bond – with each.

One of her most rewarding experiences with NASA came last year when she took water-survival training with John Glenn before he made his return to space. She said she was impressed with how easily he fit in and completed the training. What she especially enjoyed was hearing stories from Glenn about her father when he was younger.

Dare to Dream Big

When she isn't training, flying in space, or performing her Navy duties, Lawrence, like other astronauts, is required to do public speaking engagements on behalf of NASA. She chooses to speak with school-age children.

She said it is important for kids today to hear that they can dream big dreams. She tells them not to listen to negative feedback. "You must believe in yourself. You might not achieve your dreams, but

you can try. And the road along the way is well worth taking."

Lawrence practices what she preaches. She encourages kids to live one day at a time and do the best they can. She gives a lot of credit to her parents for this philosophy. "My parents never preached that I had to be the best. They just encouraged me to do my best." She said she tells children that she was once right where they are, and she is living proof they can do anything they put their minds to. "If you do your best and give it your all, you can always keep your head held up high."

That is how Lawrence has journeyed through life – with her head held high and her eyes clear and focused. Although she has had to make some sacrifices, she said. "I have no regrets. I've accomplished my dream and it is everything I thought it was going to be and more."

What's Next?

Lawrence said people often ask her, "Now that you've achieved this goal, what is your next one?" She tells them that sometimes it's just nice to sit back and savor the feeling.

While savoring her achievement, Navy Commander Wendy Lawrence, is hard at work in the research and development directorate at the National Reconnaissance Office (NRO). On a rotational assignment from NASA, Lawrence said her current position gives her the opportunity to work with satellites – the unmanned aspects of space flight.

Lawrence, who works with contractors to develop operating systems in space, said her first real experience with the acquisition community came when she was a student at DSMC. The ISAC 99-03 graduate said her time at the college provided an overall foundation for what is involved in the acquisition process.

When her three-year tour at NRO is up, Lawrence said she hopes to once again suit up and do the no-gravity shuffle.

Selected Acquisition Reports

he Department of Defense has released details on major defense acquisition program cost and schedule changes since the September 1998 reporting period. This information is based on the Selected Acquisition Reports (SAR) submitted to the Congress for the Dec. 31, 1998, reporting period.

SARs summarize the latest estimates of cost, schedule, and technical status. These reports are prepared annually in conjunction with the president's budget. Subsequent quarterly exception reports are required only for those programs experiencing unit cost increases of at least 15 percent or schedule delays of at least six months. Quarterly SARs are also submitted for initial reports, final reports, and for programs that are re-baselined at major milestone decisions.

The total program cost estimates provided in the SARs include research and development, procurement, military construction, and acquisition-related operations and maintenance. Total program costs reflect actual costs to date as well as anticipated costs for future efforts. All estimates include allowances for anticipated inflation.

The current estimate of program acquisition costs for programs covered by SARs for the prior reporting period (September 1998) was $679,999.3 million. After adding the costs for a new program (CH-60S) in September 1998, the adjusted current estimate of program acquisition costs was $683,153.3 million. There was a net increase of $15,025.0 million during the current reporting period (December 1998). The cost changes between September and December 1998 are summarized below:

Current Estimate
($ in Millions)

September 1998 (77 programs*)	**$ 679,999.3**
Plus one new program, CH-60S	+3,154.0
September 1998 Adjusted (78 programs*)	**$683,153.3**

*The Air Force's B-1 CMUP-Computer Upgrade, B-1 CMUP-DSUP, and B-1 CMUP-JDAM were combined into a single B-1 CMUP report, so the number of DoD programs has decreased by two since the September 1998 reporting period. Also, the Air Force's MILSTAR program has classified costs and is excluded.

Editor's Note: This information is in the public domain at **http://www.defenselink.mil/news** on the Internet.

Distance Learning Battle Staff NCO Course Full-Time to USAREUR

JIM CALDWELL

FORT MONROE, Va. – United States Army Europe will begin using distance learning courses to fill a training need in 2000.

Annual personnel rotations create a constant shortage of NCOs qualified for battle staff positions.

"Currently, there are 697 2S (battle staff NCO) coded positions in USAREUR. USAREUR is short 215 qualified personnel to fill these slots," said Lt. Col. Carolyn Smith, Chief, Combined Arms Training Center for 7th Army Training Command, at Vilseck, Germany.

"Distance learning, once fully operational, should produce 240 BSNCO-trained soldiers a year."

USAREUR officials say these qualified NCOs can be produced in three different distance learning classes taught by the U.S. Army Sergeants Major Academy, Fort Bliss, Texas, each year. They will be similar to the "test" BSNCOC held at Vilseck in November and December. Another trial course will be conducted this spring to work out any operational and logistical problems that might arise.

Of 80 staff sergeants, sergeants first class, and master sergeants who began Phase I of the course, 14 were no-shows in November or they failed the Army Physical Fitness Test. Phase I is home-study written material covering common core subjects.

The 66 remaining students began Phase II in four classrooms at Vilseck. Three of the classrooms were connected to a deployable distance learning classroom. USASMA instructors at Fort Bliss taught the course through videoteletraining, while four assistant instructors were on site to assist students.

"We linked the four AIs [assistant instructors] by radio with the master controller and each classroom," said Dr. Carl Wyatt, Chief of Deployable Training, Deputy Chief of Staff for Training at Training and Doctrine Command.

"An AI could see if a soldier didn't quite understand a point in the class, and he would tell the master control to relay a message to USASMA to touch on that point again in the summary."

Each classroom represented a "battle group," and the students in them were on battle staffs that had different missions. Each of the battle groups concluded the course with a graded simulation-based command post exercise at Hohenfels.

One student failed the course academically, a rate comparable to resident courses at Fort Bliss, according to Sgt. Maj. Dan Hubbard of USASMA. Grade averages were also similar to resident scores.

USASMA conducts regularly scheduled distance learning BSNCOC at four sites in the United States: Fort Bragg, N.C.; Fort Benning, Ga.; Fort Hood, Texas; and Fort Sill, Okla. USASMA will add Fort Polk, La., to the list this summer. A Total Army Training System BSNCOC is also offered at Fort McCoy, Wis., a U.S. Army Reserve post. Both active and reserve component soldiers attend the TATS course.

"The current distance learning course design is a success and delivers quality training to standard," Hubbard said. "We are currently evaluating ways to integrate digital staff tasks into the course to support the digital force in the 21st century."

Editor's Note: Caldwell is a writer with Training and Doctrine Command's Public Affairs Office at Fort Monroe, Va. This information is in the public domain at http://www.dtic.mil/armylink/news/ on the World Wide Web.

THE UNDER SECRETARY OF DEFENSE
3010 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-3010

26 FEB 1999

ACQUISITION AND
TECHNOLOGY

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARY OF DEFENSE (COMPTROLLER)
UNDER SECRETARY OF DEFENSE (PERSONNEL & READINESS)
ASSISTANT SECRETARY OF DEFENSE (COMMAND, CONTROL,
COMMUNICATIONS & INTELLIGENCE)
GENERAL COUNSEL OF THE DEPARTMENT OF DEFENSE
INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE
DIRECTOR OF OPERATIONAL TEST AND EVALUATION
DIRECTORS OF DEFENSE AGENCIES

SUBJECT: Acquisition and Logistics Reform Week — June 7-11, 1999, "Accelerating the Revolution"

Acquisition and Logistics Reform continue to be critical elements of the Department's Revolution in Business Affairs. To ensure our reform efforts are successful, I think it is vitally important that we take time to discuss at every level of the chain of command the application of our ongoing acquisition and logistics reform initiatives, and to determine how best we can accelerate their implementation. Therefore, June 7-11, 1999, has been designated Acquisition and Logistics Reform Week. The theme for that week is: "Accelerating the Revolution."

Sometime between June 7-11, 1999, I would like your organizations to cease their normal operations for one day and focus on our acquisition and logistics reform initiatives, to share implementation successes, and to determine how best they can be applied to the team's mission.

Commanders and managers at all levels will be responsible for planning, conducting, and participating in the day's activities. To that end, we will not dictate the day's agenda. Each team will design their own activities consistent with the needs of their organization. Those activities may include: case studies, discussions of lessons learned, panels, speeches, classes, and simulations. We must emphasize the day-to-day application of our initiatives while training as we work — as a team.

To support you, the Defense Acquisition University's Acquisition Reform Communications Center (ARCC) will be providing a package of training materials via the Internet. Teams may use these materials to supplement or add focus to their own training programs, both during Acquisition and Logistics Reform Week and throughout the remainder of the year. Instructor guides will be provided to assist managers in designing and leading their own training. This training package, together with our satellite broadcasts and other Service/Agency-hosted training events support our policy of providing 80 hours of continuing education biannually.

We've come a long way, but much remains to be done. Let's capitalize on the opportunity offered by Acquisition and Logistics Reform Week to accelerate the Revolution in Business Affairs, and take the next step on the road to providing better, faster, and cheaper products to our customer — the warfighter.

J.S. Gansler

Second International Acquisition/Procurement Seminar – Pacific
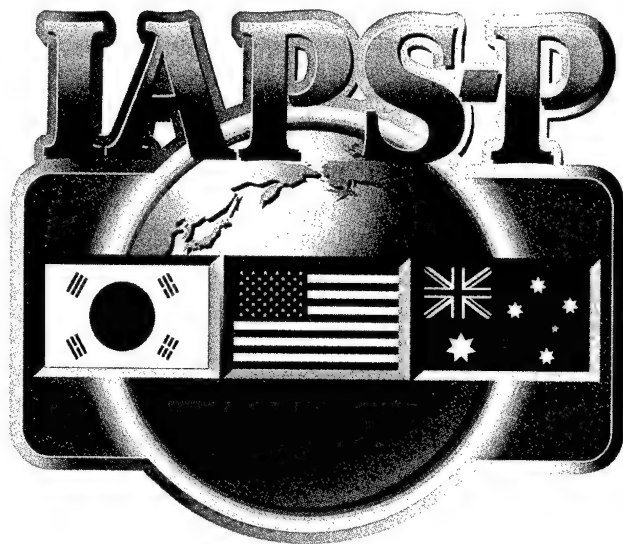
September 14-17, 1999

**Sponsored jointly by the
Korean Institute for Defense Analysis (KIDA)
Defense Systems Management College (DSMC)
Australian Defence Force Academy (ADFA)
in
Seoul, Republic of Korea**

TOPICS

- **Comparative National Acquisition Practices: PACRIM Nations**
- **National Policies on International Acquisition/Procurement**
- **International Program Managers: Government and Industry**
- **Trans-Pacific Cooperation**
- **Legal Issues and Intellectual Property Rights**
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Qualified participants pay no seminar fee.

For further information, contact any member
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or

Visit our Web site:
http://www.dsmc.dsm.mil/international/international.htm

The Second International Acquisition/Procurement Seminar—Pacific focuses on international acquisition practices and cooperative programs. The seminar is sponsored by defense educational and related institutions in the United States, the Republic of Korea, and Australia.

The seminar will be held Sept. 14-17, at the Korean Institute for Defense Analysis, Seoul, Republic of Korea.

Those eligible to attend are Defense Department/Ministry and defense industry employees from the three sponsoring nations, who are actively engaged in international defense acquisition programs. Other nations may participate by invitation. PACRIM nations participating in the First Pacific Seminar were Canada, Japan, New Zealand, Singapore, and Thailand.

Those desiring an invitation should contact any member of the international team at DSMC. Those government personnel and industry representatives desiring an invitation should fax an official letter of request, prepared on agency/industry letterhead, to DSMC; or, visit the seminar registration Internet Web site at **http://www.dsmc.dsm.mil/international/international.htm.** *Qualified participants pay no seminar fee.* Invitations, confirmations, and joining instructions will be issued after July 1.

Prof. Richard Kwatnoski, Director, International Acquisition Courses, DSMC

- Sharon Boyd, International Seminar Coordinator, DSMC

Comm: (703) 805-5196/4592
DSN: 655-5196/4592
Fax: (703) 805-3175
         DSN: 655-3175

Dr. CHO, Namhoon
E-mail: chonh@kida.re.kr

Dr. Stefan Markowski
Comm: (61) 2 6268 8094
Fax: (61) 2 6268 8450
E-mail: s.markowski@adfa.edu.au

EELV Program — An Acquisition Reform Success Story

LT. COL. SIDNEY KIMHAN III, U.S. AIR FORCE
CAPT. JANET GRONDIN, U.S. AIR FORCE
CAPT. JENNIFER KARES KLEIN, U.S. AIR FORCE
JOHN MARTILLO

As technology has advanced, the U.S. military has come to depend on it more and more. This is especially true when launching satellites and using the information they provide for planning and performing operational missions. Whether using the Global Positioning System, hooking up secure satellite communications, or checking weather images, clearly the military's need for information provided by satellites will only increase into the future.

"By fully integrating space capabilities into military operations, combatant commanders are better able to tailor their campaign planning and operations to more effectively employ available forces and achieve objectives at the least risk and cost," stated former Secretary of Defense William Perry in his annual report to the president and Congress in March 1996. Every time the Air Force launches an expendable rocket, a satellite is placed in orbit to augment or improve one of its many functions — at no small expense to the taxpayer. The Evolved Expendable Launch Vehicle (EELV) program was conceived to ensure these satellites reach their target on time, on budget, fully operational, and at 25 to 50 percent less cost than current rocket systems.

An Acquisition Category Level ID program, EELV is being developed using the latest acquisition reform initiatives to drive down the cost of space launch without losing the capability of today's expendable launchers. Nearly all Department of Defense satellites are launched using Titan, Atlas, and Delta rockets, the cost of which can be close to that of their payloads.

Several programs designed to reduce these costs preceded EELV, including the Advanced Launch System program (1987-1990), the National Launch System program (1991-1992), and the Spacelifter program (1993). Each provided valuable technical data but failed to fully address the nation's space-launch needs for a variety of reasons (Figure 1).

Following the cancellation of Spacelifter, with space-launch costs still rising and no solution to the problem, Congress requested a Space Launch Modernization Plan from DoD. Subsequently, Air Force Lt. Gen. Thomas Moorman, with participants from the military, civil, industry, and intelligence communities, led the Space Launch Modernization Study in 1994. Of the four proposed approaches to lowering the cost of space launch, the Air Force budgeted to support the second option — evolve current expendable launch systems.

"This program [EELV] has tremendous potential benefits for the country. We will secure low-cost, reliable space access for the nation and the military, and we can dramatically expand key areas of the aerospace industry as these launchers are made available for international use," said Dr. Sheila Widnall, former Secretary of the Air Force.

Today, Preliminary Design Reviews are complete and Critical Design Reviews are less than three months away. A tremendous acquisition reform success story, the EELV program has been honored with the DoD Value Engineering Award, the U.S. Air Force and Air Force Materiel Command Strategic Acquisition Reform Awards, the U.S. Air Force and Air Force Materiel Command Outstanding Team Contribution To Competition Awards, and the Federal Executive Board Distinguished Public Service Team Award. EELV is also a nominee for the Packard Award, the Welch Award, and the U.S. Air Force Organizational Excellence Award.

Up, Up, and Away

The EELV system includes medium- and heavy-launch vehicle variants and associated launch pads, processing facilities, and control systems. Navigation, intelligence, weather, communications, civil, and commercial satellites will be launched from Cape Canaveral Air Station, Fla., and Vandenberg Air Force Base, Calif., beginning in 2002. The system relies heavily on heritage design from current Titan IV, Titan III, Atlas II,

and Delta II programs including manufacturing techniques, structures, avionics, and propulsion systems. The system will deliver payloads to geosynchronous, geosynchronous transfer, low earth, semi-synchronous, and polar orbits, as well as provide the capability to deliver exploration satellites to interplanetary orbits. These missions will be launched with a 98-percent design reliability and within 10 days of the scheduled launch date. The system incorporates standard payload interfaces and standard launch pads to reduce costly payload-to-launch vehicle and launch-vehicle-to-ground integration activities. In the event of an urgent military need, an EELV can be "called-up" to launch certain pre-integrated payloads within 45 days of notification by the government.

An Effective Strategy
Using a rolling downselect approach, the development program began in August 1995 with a competitive award of four contracts.

The development program is comprised of three modules: Low Cost Concept Validation (LCCV), completed in November 1996; Pre-Engineering and Manufacturing Development (Pre-EMD), completed in July 1998; and Engineering and Manufacturing Development (EMD), which began in October 1998 and is scheduled to be completed in October 2002. Along with the EMD contracts, Initial Launch Services (ILS) contracts were awarded for launching government payloads from 2002 – 2006 (Figure 2). Because of the burgeoning commercial-launch market, the EELV program office revised the acquisition strategy in November 1997 to allow up to two EMD and ILS contractors, encourage contractor cost sharing, maintain competition for the life of the program, and leverage the rapidly growing commercial launch market.

In May 1995, Alliant Techsystems, Boeing Defense and Space Group, Lockheed Martin Astronautics, and McDonnell Douglas Aerospace were each awarded $30 million contracts for LCCV and took their designs through Preliminary Design Review. Of the four, Lockheed Martin

IN THE EVENT OF AN URGENT MILITARY NEED, AN EELV CAN BE "CALLED-UP" TO LAUNCH CERTAIN PRE-INTEGRATED PAYLOADS WITHIN 45 DAYS OF NOTIFICATION BY THE GOVERNMENT.

Astronautics and McDonnell Douglas Aerospace (now a wholly owned subsidiary of The Boeing Company) were selected to continue and were each awarded $60 million Pre-EMD contracts (Figures 3 and 4). Both contractors held a Downselect Design Review in February 1998 followed by release of the Request for Proposal for the EMD and ILS contracts in June 1998 and award of the contracts in October 1998.

In EMD, contractors will complete a Tailored Critical Design Review, establish manufacturing infrastructure, construct and activate launch sites, and complete launch-vehicle development. Concurrently, mission integration activities and analysis will be initiated to support the 2002 – 2006 ILS launches.

Acquisition Reform Initiatives — Cornerstone for Success
Throughout the rolling downselect, acquisition reform initiatives were the cornerstone for success. EELV was initiated with a streamlined chain of command by identifying a single program manager with the responsibility, authority, and accountability to execute the program. Only the system program director, program executive officer, and service acquisition executive are required to execute the program. Also initiated at program conception was a Single Acquisition Management Plan (SAMP) that streamlined routine acquisition documentation by including the Integrated Program Assessment, Acquisition Plan, Acquisition Program Baseline, and Fixed

FIGURE 1.
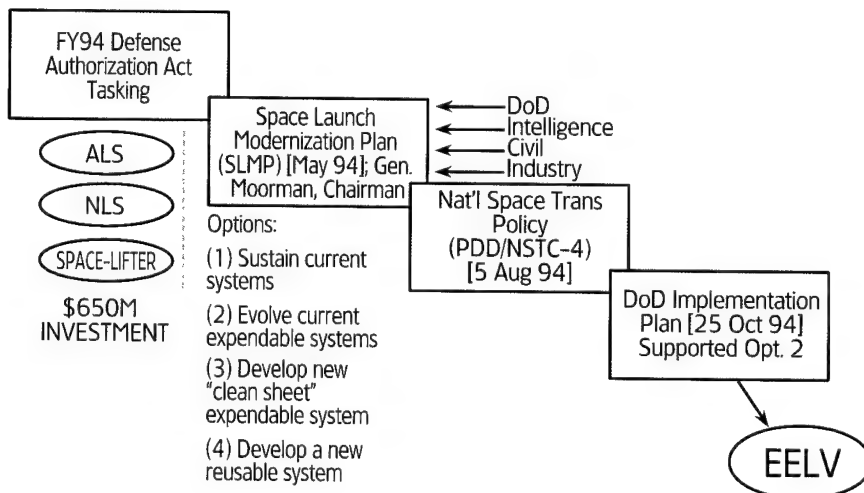
Price Determination in one single document.

The SAMP was agreed to by acquisition, test, operational, and Pentagon leadership, including the Air Force Operational Test and Evaluation Center (AFOTEC), Air Force Space Command, National Reconnaissance Office, and Under Secretary of Defense (Acquisition and Technology).

To streamline interaction with contractors, the EELV program office is limited to 106 workers composed of service members, DoD civilians, and support contractors. All functions, including engineering, contracting, program control, contract management, administration, and computer support are executed by the 106 people assigned to EELV. This is a significant departure from the large program offices that have traditionally supported military-launch acquisition. This limited manpower — by design — ensures the government technical team members focus on critical, high-value contractor processes and procedures. The limited size also reduces program costs and duplication of effort.

Minimizing contract requirements for deliverable data items further enhances efficient interaction with the contractors. Only 15 deliverables were required during LCCV and eight in Pre-EMD. No deliverables are required on the EMD and ILS contracts. Instead, contractors are required to provide electronic access to key data such as specifications, test plans, vehicle-flight data, technical-performance measures, system security management plans, and payment history. By eliminating deliverables, contractors are free to choose the format that most effectively supports managing the program. Electronic access gives the government real-time insight, improved communication, and reduces overall program costs.

Recognizing that contractors often have more cost-effective solutions to technical issues than the government, compliance with military specifications and standards is not required, giving contractors maximum control and flexibil-

FIGURE 2.1
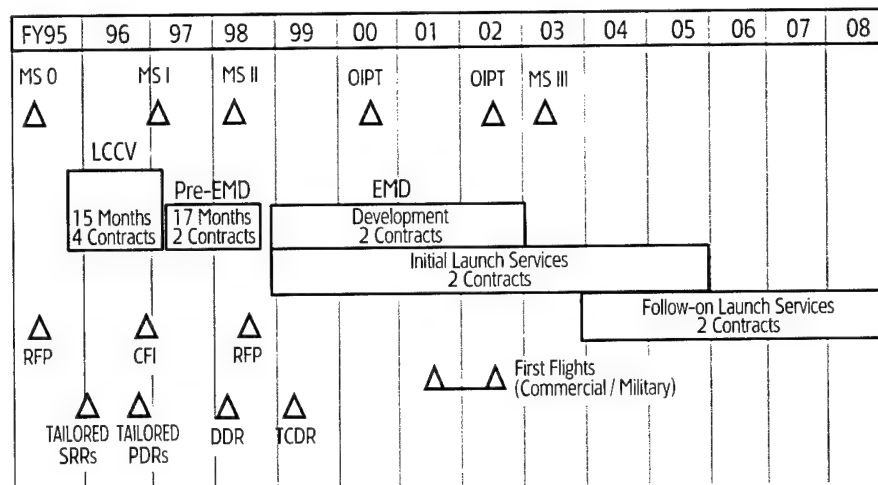
ity for meeting the system's Key Performance Parameter (KPP) requirements of mass-to-orbit, reliability, and standardization. KPPs are documented in the System Performance Requirements Document and are specified at a high level to allow contractors the freedom to choose the path for meeting those requirements. Program office insight, through participation on contractor IPTs, enables government technical teams to evaluate the standards and specifications chosen for use in design, test, and manufacturing.

Use of evolved and commercial off-the-shelf components is encouraged to incorporate lessons learned from past successes (and failures) while minimizing development costs. To further support the goal of reducing space-launch costs by 25 to 50 percent, contractors are challenged to minimize Material Review Board (MRB) activity that traditionally requires significant government and contractor involvement in accepting reworked and out-of-specification hardware. The ultimate goal is elimination of MRBs, and the associated review teams, after the program has entered production.

Teamwork is a Winning Concept
During each phase of the program, dedicated teams of government personnel are assigned to work with contractors on technical, cost, and contractual issues. These teams are referred to as the Integrated Product Teams (IPT). A typical IPT consists of six military or DoD

civilians and three Federally Funded Research and Development Center members from The Aerospace Corporation. These IPTs are the primary interface to the contractor, ensuring issues are given appropriate attention by government and contractor personnel.

The core of the program office is organized along traditional functional areas of operation. Program control, contracting, vehicle development, and systems engineering teams focus on ensuring requirements are defined, funding is in place, and contracting activities are properly planned and executed. While these core team members interface with all contractors, dedicated IPT members are restricted to interfacing with the contractor to which they are assigned.

The IPTs focus on gaining insight — ensuring government requirements are being met and staying abreast of design and management activities by attending contractor meetings and reviewing plans, reports, and specifications. To accomplish this mission, technical advisors from the core team are employed extensively. IPTs brief the status of the contractor's performance to the program director every month.
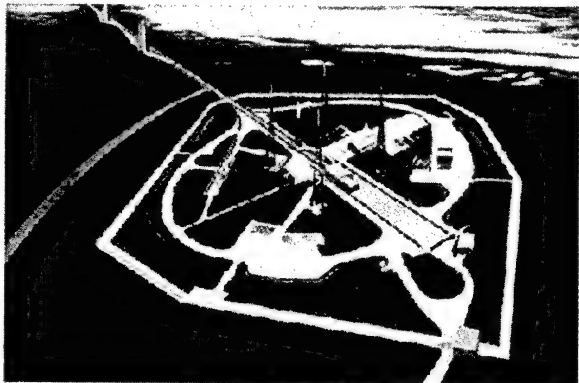
EELV IPTs — Small, But Experienced
Because the System Program Office (SPO) is capped at 106 people, the IPTs are small but staffed with experienced personnel. Planning, use of experienced advisors, and help from other govern-
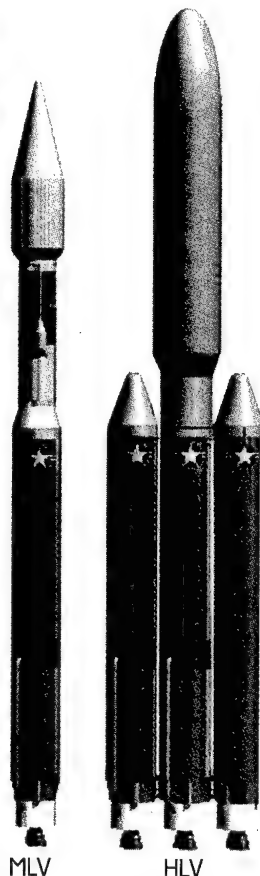
FIGURE 3.
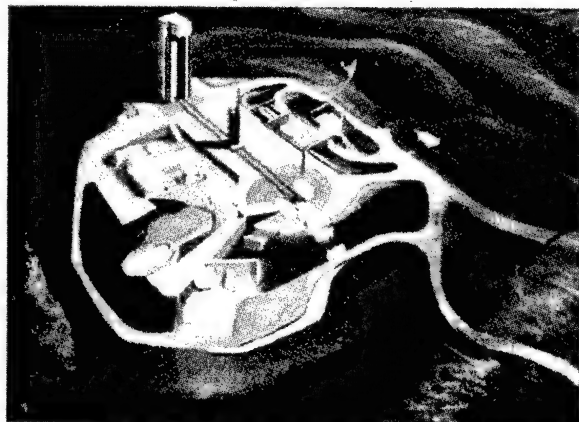
Vandenberg AFB, Calif. — VAFB SLC-3W

Cape Canaveral Air Station, Fla. — CCAS LC-41

MLV   HLV

ment agencies aid greatly in implementing acquisition reform in EELV.

In general, only senior- and mid-level captains and civilians are employed on the IPTs, most with prior SPO experience, enabling problem resolution at the lowest levels and in a timely manner. Each IPT member is responsible for different technical areas and ensuring adequate coverage of meetings, document reviews, and test events. Dedicated IPT members spend the majority of their time at contractor meetings, listening to contractor discussions of verification events, analysis, trades, and configuration changes. As document deliveries, meetings, and tests are scheduled, IPTs request support from the core team of advisors to gain additional insight in a technical area.

The Aerospace Corporation is the technical backbone of the program, having been involved in the space-launch community for over 37 years. Many of the same Aerospace technical advisors that helped shape today's Atlas, Delta, and

Titan rockets bring that experience to the EELV program. Experts in structures, avionics, software, site activation, facilities, propulsion, reliability, mission performance, guidance and controls, and mission integration are available to assess contractor performance and report issues to the IPTs. Lead engineers in key

positions are assigned directly to the SPO, with the remainder of the Aerospace Corporation support being drawn from its large, matrixed engineering organization.

While SPO membership is limited to 106 members, there is no limit on the number of people who can help from supporting organizations. Defense Contract Management Command technical personnel supplement the IPTs by providing experts in software, manufacturing, and structures. AFOTEC and specialized Space and Missile System Center Test and Evaluation teams provide additional test support, while Air Force Space Command assigns one officer to each contractor team to clarify requirements and work launch-site issues. These extended team members enable maximum insight without increasing total SPO manpower.

A Working Relationship

The government IPTs are organized to parallel the contractor's organization. Each Air Force counterpart is responsible for forming the government team, clarifying requirements, pulling together technical evaluations, reporting status to the program director, and providing feedback to the contractor. The Aerospace Corporation is responsible for reviewing designs, analysis, and plans and reporting their assessments to the Air Force team leader. The contractor's responsibility includes ensuring the

FIGURE 4.
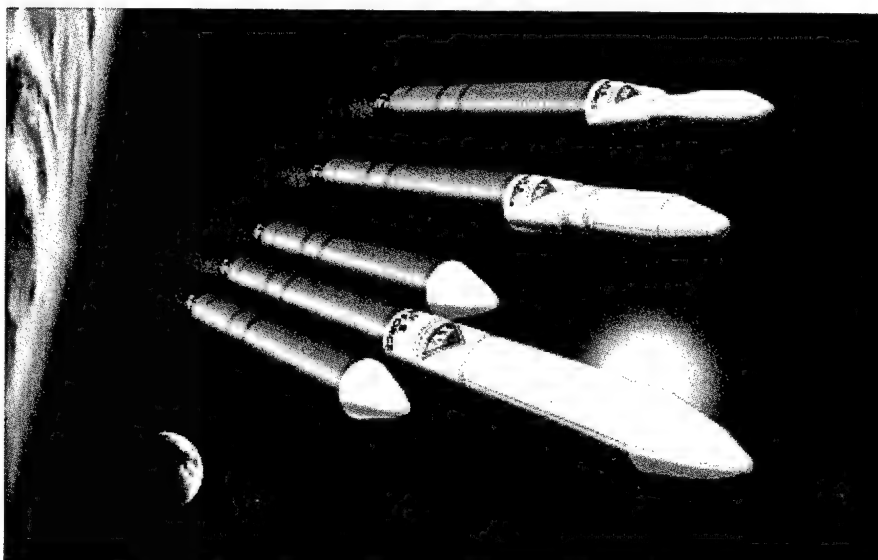
government has full access to meetings, documents, and events pertinent to the development of the system.

The parallel contractor and government team organizations are part of a larger government focus to make the best use of detailed technical activities in which the contractor regularly engages as the designer of the system — not to create a separate government review process. Because government IPTs are aligned with contractor teams, the process of gathering regular insight into the contractor's system is a natural one. On the surface, this method of government participation may not appear to be different from historical methods; however, on EELV, the contractor determines what meetings are needed, and the government attends rather than organizes or chairs the meetings. This approach supports EELV's acquisition reform initiatives to focus the government on defining requirements, while the contractors focus on meeting requirements.

One of the fundamental rules of engagement of contractor interaction, and probably the most constraining for the technical community, is the restriction on "coaching." As designs evolve and choices are made, often different technical opinions surface between the contractors and the government. As part of EELV's acquisition reform initiatives, the technical community has been restricted from solving the contractors' technical problems. This ensures the responsibility for design remains with the contractors and frees up program office resources to participate in an unbiased evaluation. This ground rule also enables the contractors' creative-design processes to occur. However, the government does make available to all, the results of research and development work done at Air Force laboratories and other sites, which may help the contractors with technical problems. In fact, during LCCV, the SPO sponsored several technical fairs and made visits to all Air Force laboratories and NASA centers to ensure all EELV competitors had access to the latest information and facilities. This EELV acquisition reform approach achieves acceptable technical solutions, but at times the government team

endures frustration while the creative design process runs its course.

Maintaining Influence

Although restricted from suggesting technical solutions, the government retains influence in the design process through continuous risk evaluations and periodic reports to the program director. As contractors make decisions, each government IPT member and Aerospace functional expert stays in touch with the configuration of the system and continuously evaluates the approach. These risks are folded into a monthly briefing by the government IPT to the system program director that gives a "slice-in-time" view of the contractor's performance. Included in the briefing are design changes and contractor-generated system metrics with current predictions for mass-to-orbit, weight, reliability, operability, specification completeness, and software progress. In addition, IPTs brief all pertinent issues associated with the contract, including problems the government needs to solve. The overriding criteria are whether or not the contractors are meeting the government requirements. Only when they are not does the government intervene.

The effectiveness of the monthly briefings is due to the government's close relationship with the contractors. The IPTs work closely with contractor counterparts to build the briefing, ensuring that as the technical evaluation of the system is updated and reported on, the contractor is fully aware of government concerns. Frequently, government concerns are addressed before it becomes necessary to report to the program director. Occasionally, a risk is not sufficiently addressed, and the program director elects to step in and discuss the situation with the contractors. At this time, a mutually agreed-upon Risk Reduction Plan is developed and tracked by both the government and contractors. This close coordination on technical evaluations is key to the successful relationships enjoyed by EELV program members.

Future Challenges

One challenge EELV faces in the coming years is maintaining an adequate ex-

perience level with reduced manpower. Most of the experts involved have been working with current launch systems for many years and are comfortable in a more detailed information environment than EELV's small program office is able to manage. Without time to review and analyze the details, experts may lose the technical depth which DoD depends on.

Current Air Force launch programs depend heavily on technical depth to help identify system flaws that could result in loss of a vehicle. Unfortunately, failures are a reality of the launch business, and though EELV contractors produce world-class vehicles, some will fail over the course of the program. These failures and other developmental setbacks that occur will challenge the program to maintain the focus on *insight* rather than reverting back to traditional *oversight.*

EELV — Cost-Effective Way to Help Improve the Military

Space assets provide navigation, communications, reconnaissance, and weather data critical to modern military operations; now, with EELV, the ride to orbit will cost 25 to 50 percent less than current systems. Because EELV borrows from significant technical advances made on previous programs and employs an aggressive acquisition reform approach, the system is within three months of Tailored Critical Design Review and within two years of first launch. Along the way, acquisition reform has been the cornerstone of success, lighting the way for trusting partnerships with launch-vehicle contractors. In the words of Air Force Gen. Howell M. Estes III, former commander in chief, U.S. Space Command, "The time has come to address, among warfighters and national policy makers, the emergence of space as a center of gravity for DoD and the nation. We must commit enough planning and resources to protect and enhance our access to, and use of, space." EELV is one significant step forward in addressing the nation's space-launch needs.

Editor's Note: To learn more about the program, please visit the EELV Web site at **www.laafb.af.mil/SMC/MV/ eelvhome.htm.**

People First: Competitive Sourcing, Privatization Unit Maps Way

n today's Air Force, Competitive Sourcing and Privatization is needed to free up critical funds for commanders to meet future challenges as the Service's missions evolve.

CS&P has been in-place for years; however, many people do not understand the process. In keeping with the Air Force tradition of taking care of its own, the Deputy Chief of Staff for Personnel established a CS&P office in May 1998 to serve as the focal point for issues related to CS&P and to help Air Force people better navigate through the process.

Since opening its doors, the CS&P office has made great strides in helping military and civilian people prepare for future competitive sourcing studies. Their efforts include a "Handbook for Civilian Personnel on Competitive Sourcing and Privatization" and development of a CS&P course for Air Force personnel specialists.

The CS&P staff realizes how stressful consideration for competitive sourcing can be for Air Force people. One of their goals is to make the process less taxing through education by providing personnel flights with information about the process. In addition, the staff has daily contact with major commands and functional experts that are considering competitive sourcing studies, to make sure personnel implications of studies are considered.

Deputy Chief of Staff for Personnel Lt. Gen. Donald L. Peterson is dedicated to ensuring the Air Force finds the right mix of military, civilian, and contract workers to sustain the world's finest air and space force into the new millennium.

Editor's Note: This information is in the public domain at **http://www.af.mil/news/** on the World Wide Web.

Army Materiel Command Sets Up Special Web Site

BOBBIE GALFORD

ALEXANDRIA, Va., – The U.S. Army Materiel Command has developed a Web site to provide Historically Black Colleges and Universities/Minority Institutions' customers information about business and educational opportunities in AMC and the U.S. Army. The site will also provide AMC technology and information managers with HBCU/MI capabilities.

Specifically, the home page links to other Army and Department of Defense business opportunities, fellowships, grants, other agreements and special programs designed to increase HBCU/MI participation in AMC procurements. AMC, whose mission is to equip and sustain the total force of Active, Guard and Reserve soldiers, actively supports programs to assist HBCU/MI.

Laws have been enacted by Congress to provide support for HBCU/MI, including Tribal Colleges and Hispanic Institutions. These laws are prescribed in the U.S. Code for government departments. Additionally, White House Executive Order #12928, Sept. 16, 1994, requires that federal personnel commit to the letter and spirit of all laws promoting participation of HBCU/MI in federal procurement.

To develop, buy, and maintain materiel for the Army, AMC works closely with industry as well as colleges and universities to ensure that state-of-the-art technology is integrated for the defense of the nation.

"The HBCU/MI program is very important and contributes to the AMC mission," John Byers, Chief, AMC Technology Application and Laboratory Management Division, said. "The purpose of our Web site is to provide a forum for Army technology and acquisition managers to interact with representatives from Historically Black Colleges and Universities and Minority Institutions," he said. "The site also gives these institutions information about the kinds of U.S. Army business opportunities, fellowships, and grants that are available to them."

The U.S. Army Materiel Command has a longstanding history partnering with HBCU/MI. The Small and Disadvantaged Business Offices throughout AMC Major Subordinate Commands can provide information about contracting procedures and educational opportunities.

For more information, visit the AMC HBCU/MI Web site at **http://www2.brtrc.com/amc/hbcu_mi/**.

Editor's Note: Galford is a writer with the Army Materiel Command's Public Affairs Office in Alexandria, Va. This information is in the public domain at **http://www.dtic.mil/armylink/news/** on the World Wide Web.

TACOM-ARDEC Wins New Jersey's Top Quality Achievement Award

Strategic Management and
Innovation Division

WASHINGTON – New Jersey's Chief Executive Officer and Commerce Secretary presented the prestigious New Jersey's Quality Achievement Award to Brig. Gen. John Geis, Commanding General, U.S. Army Tank-automotive and Armament Command's Armament Research, Development, and Engineering Center, during New Jersey's 10th Annual Quality Conference. TACOM-ARDEC is the first Federal Government organization to win the NJQAA.

The Quality New Jersey Award examiners used the Malcolm Baldrige National Quality Award Criteria for Performance Excellence in the selection process. The Baldrige Criteria is the basis for the Army Performance Improvement Criteria – a measure of excellence in applying Total Army Quality principles.

TACOM-ARDEC's early adoption of TAQ and use of the APIC have focused their quest for continuous improvement and performance excellence, recognized with the Federal Government's top award, the President's Award for Quality in 1996, the Army Communities of Excellence Commander in Chief's top Award in 1996, and now the NJQAA.

ARDEC will also be receiving the ACOE Chief of Staff, Army Award in May 1999. QNJ examiners scored TACOM-ARDEC's business processes as excellent in all the categories of the Baldrige criteria.

At the request of the QNJ organization, Col. Dan Prescott TACOM-ARDEC deputy commander and other members of the TACOM-ARDEC staff briefed the QNJ's 1999 Annual Sharing Conference about their high-quality processes and strategies for achieving continuous improvement of performance excellence. The conference took place April 22 at the Bridgewater Manor.

> The Baldrige Criteria is the basis for the Army Performance Improvement Criteria — a measure of excellence in applying Total Army Quality principles.

Editor's Note: This information is in the public domain at **http://www.dtic.mil/armylink/news/**on the World Wide Web.

THE MALCOLM BALDRIGE NATIONAL QUALITY AWARD WAS ESTABLISHED BY CONGRESS IN 1987 TO PROMOTE QUALITY AWARENESS, TO RECOGNIZE QUALITY ACHIEVEMENTS OF U.S. COMPANIES, AND TO PUBLICIZE SUCCESSFUL QUALITY STRATEGIES. THE AWARD IS NOT GIVEN FOR SPECIFIC PRODUCTS OR SERVICES. IN COOPERATION WITH THE PRIVATE SECTOR, THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY DEVELOPED AND CONTINUES TO MANAGE THE AWARD PROGRAM.
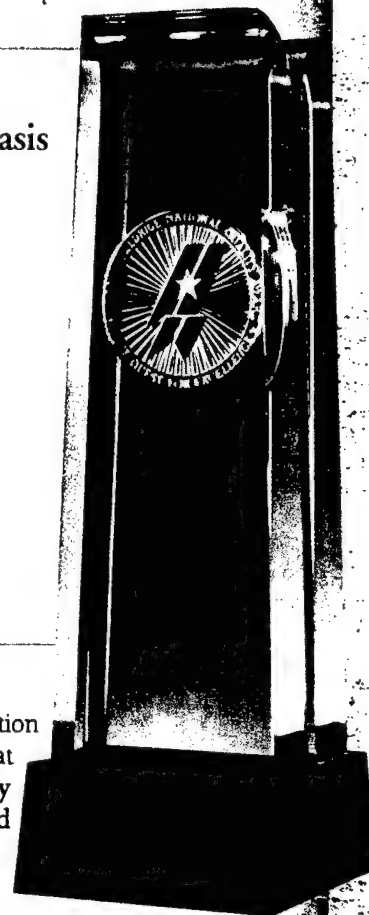
Indian Head Division Stands Up New Joint Program Office

Managing Sustainment of Cartridge Actuated Devices & Propellant Actuated Devices

DENNIS CHAPPELL • TONY TAYLOR

In the Department of Defense, joint-Service programs have existed for many years. Usually, two or more Services will join in a co-operative effort to develop, test, and acquire a weapon system. Once the system is fielded, ongoing sustainment traditionally becomes the responsibility of each using Service. *Sustainment* means the range of activities needed to maintain a system in operational usage, including spares acquisition, quality assurance, maintenance, repair, product improvement, and disposal. The joint program described in this article differs from the common model in four key respects:

- First, it employs jointness during the sustainment phase of the life cycle, rather than the usual development phase.

- Second, the program involves a commodity rather than a weapon system.

- Third, by accepting a lead-Service role, the Navy assumed responsibility for an important factor in the operational readiness of many Air Force aircraft, a move requiring a high level of trust on both sides.

- Fourth, the impetus for a joint program began at the working level, rather than being directed from the top.

What Are CADs/PADs?

Cartridge Actuated Devices (CAD) and Propellant Actuated Devices (PAD) are commodity items that function as a system component. In operation, they release precise explosive or propellant energy to perform controlled work functions in a variety of applications, including aircrew escape, fire suppression, and stores/emergency release systems.

They generally contain an energetic material along with a mechanical or electronic actuating component. About 3,100 different configurations are now in use by all Services. Many of these are man-rated, requiring a high degree of reliability.

Some CADs and PADs are expended in normal operations, such as those used for stores release; others are used only in emergencies. All have a defined shelf/service life and must be replaced periodically. CADs and PADs that are needed for safety of flight can cause the grounding of aircraft if they are defective or past their defined shelf/service life.

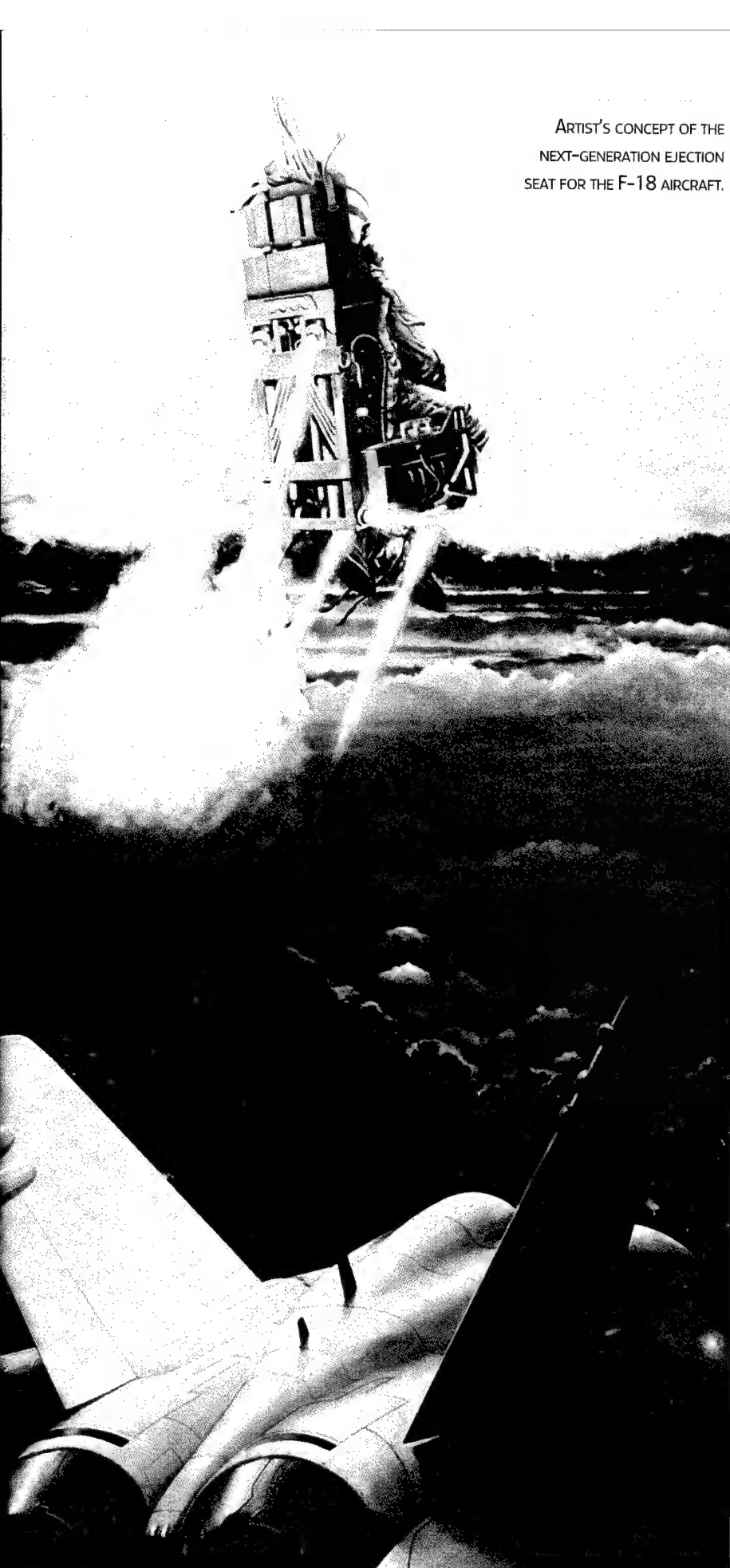## Life-Cycle Management Responsibilities

CADs and PADs are normally developed as a component of a weapon or life support system. Responsibility for initial development rests with the acquisition program manager. For example, the 112

CADs and PADs in the B-2 and the 222 CADs and PADs in the F-14 were developed along with other systems in the aircraft. In keeping with the cradle-to-grave concept, when a system is fielded overall responsibility for sustainment activities, including disposal when necessary, remains with the program manager. However, day-to-day responsibility for sustainment of CADs and PADs has been delegated within each Service to achieve economies of scale.

For CADs and PADs in Navy systems, the delegation is to the Conventional Strike Weapons Program Office (PMA-201), which reports to the Program Executive Officer for Tactical Aircraft Programs. Execution of the Navy's sustainment program is accomplished by the Indian Head Division, Naval Surface Warfare Center. The size of the Navy program is about $40 million annually.

Responsibility for sustainment of Air Force CADs and PADs was formerly delegated to a unit under the Air-to-Surface Product Group Manager (PGM) at the Ogden Air Logistics Center (ALC), who reports programmatically to the Armament Product Group Manager (APGM) at Eglin Air Force Base, Fla. The size of the Air Force program is about $45 million annually.

Chappell *is the Director of the Cartridge Actuated Devices/Propellant Actuated Devices (CAD/PAD) Joint Program Office, Indian Head Division, Naval Surface Warfare Center, Indian Head, Md. Graduating from Michigan State University in 1964 as a chemical engineer, he has worked at Indian Head his entire career and has been involved with all aspects of the CAD/PAD program since 1973.* ***Taylor*** *is a consultant to the CAD/PAD Joint Program. He is a retired Air Force Reserve colonel and a former director of the House Science and Technology Subcommittee on Transportation, Aviation, and Materials.*

ARTIST'S CONCEPT OF THE
NEXT-GENERATION EJECTION
SEAT FOR THE F-18 AIRCRAFT.

Army

Responsibility for Army CAD/PAD has been consolidated within the Navy for many years.

Early Consolidation Efforts

In 1974 the Joint Logistics Commanders (JLC) agreed to consolidate most Army CAD/PAD functions within the Navy except requirements determination, budgeting, and inventory control. The agreement further stated the JLC intent that future consolidation of all remaining CAD/PAD functions under their command be accomplished at Indian Head.

Over the intervening years, the Air Force and Navy disagreed as to whether this

In recent years the effects of downsizing put pressure on Ogden's ability to maintain the expertise needed to execute Air Force CAD/PAD sustainment functions. The Navy program has not suffered to the same degree, largely because the Indian Head workforce is industrially funded.

statement of intent applied to Air Force-unique CADs and PADs, with the result that many Air Force functions continued to be executed separately at the Ogden ALC. Nevertheless, the agreement served as the starting point on a long road toward full consolidation of CAD/PAD program management functions.

Subsequent agreements among entities in the CAD/PAD community further strengthened the tri-Service nature of the program and broadened Indian Head's role to include involvement in the full life cycle. For example, experts from Indian Head routinely participate in Navy and Air Force aircraft development programs, including source selections and design reviews.

Factors Leading to the Joint Program Initiative

In recent years the effects of downsizing put pressure on Ogden's ability to maintain the expertise needed to execute Air Force CAD/PAD sustainment functions. The Navy program has not suffered to the same degree, largely because the Indian Head workforce is industrially funded. Accordingly, the Air-to-Surface PGM at Ogden suggested a study to evaluate the feasibility of a joint program.

The study, which was conducted by personnel from Ogden and Indian Head, determined that a joint program was feasible and that many efficiencies would result. Among these were elimination of unnecessary duplication in engineering, acquisition, and testing. Consolidated contracting would save by allowing fewer negotiations, contracts, lot acceptance tests, and site visits. Combined aging and surveillance testing aimed at common items and similar designs would yield further savings.

Further, a joint program would result in lower prices due to economies of scale and elimination of competition between the Services for the small industrial base. The user would benefit from better sharing of knowledge, and in the long term there would be less proliferation of multiple CAD/PAD types. And, a larger funding and personnel base would facilitate

better preservation of core expertise within DoD.

Organizational Structure

Upon approval of the CAD/PAD Joint Program Business Plan on April 16, 1998, day-to-day responsibility for DoD-wide sustainment was consolidated in the joint program, with the Navy as lead Service. The joint program reports to PMA-201. The key effect of this action is to change the programmatic reporting chain of the CAD/PAD unit at Odgen. That unit, which previously reported to the APGM at Eglin, now reports to PMA-201 through the joint program, thereby giving the Navy responsibility for sustainment of components that can affect the readiness of Air Force aircraft. Reporting for administrative purposes remains as before.

The Joint CAD/PAD Program has been constituted as an Integrated Product Team (IPT), managed by a small, jointly manned program office, reporting to PMA-201 as shown below. The program office will direct a competency-aligned organization, composed of engineering, logistics, corporate operations, manufacturing, and test competencies at Indian Head and an Air Force Integrated Product Team at Ogden ALC. The Indian Head complement consists of about 300 people. The Ogden group is the unit of approximately 18 people who previously managed sustainment of Air Force CADs and PADs from that location. Those personnel will remain Air Force employees initially, but may ultimately transfer administratively to the Navy if further downsizing affects the ability of
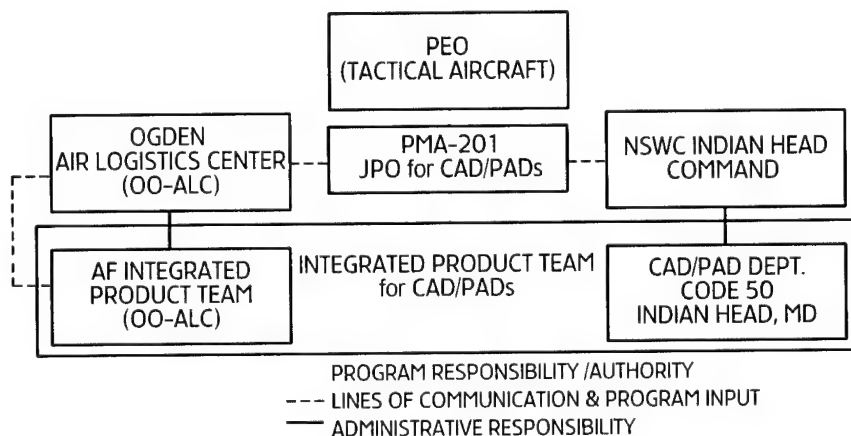
the Air Force IPT to provide adequate support. The Air Force may be supplemented with Navy authorizations as deemed necessary.

Administrative reporting and support relationships remain unchanged by stand-up of the joint program. The three departments from which the CAD/PAD competencies are drawn will continue to report to the commander at Indian Head, and the Air Force IPT reports to the Ogden ALC.

Business Strategy and Practices

A key goal of the joint program, as outlined in the Business Plan, is to employ best practices in providing operating forces and Foreign Military Sales customers with safe, reliable, cost-effective CADs and PADs, capable of fully satisfying requirements. The program will evolve during a phased transition, designed to mitigate risk. Initial changes to existing Service processes were demonstrated via trials or detailed analysis.

Contracting functions will continue to be shared by the Contracting Directorate at Ogden ALC and the Naval Inventory Control Point at Mechanicsburg, Pa. Efforts are underway to consolidate and standardize contract documents and processes to reduce duplication and accelerate contract awards. Frequent coordination between the two contracting organizations has begun, and workload will be redistributed to better use the contracting resources available. In the future, the contracting function may be consolidated further.

PROGRAM RESPONSIBILITY /AUTHORITY
--- LINES OF COMMUNICATION & PROGRAM INPUT
— ADMINISTRATIVE RESPONSIBILITY

Another goal is to enhance stewardship and communication with the CAD/PAD industrial base. Periodic technical exchange workshops have been held to keep companies abreast of developments in government laboratories. The joint program is now providing annual out-year procurement forecasts to aid industry with its planning.

Each Service will continue to be responsible for requirements determination and programming and budgeting to support its CAD/PAD needs. Funds will be transferred to the joint program for execution. The Services' existing financial management organizations and processes will continue to be used initially. The joint program will establish funding priorities and provide overall coordination of financial management functions. The potential for future consolidation of financial management functions will be evaluated.

Issues And Solutions

Jointness is hard, and especially so when new concepts are involved. The CAD/PAD Joint Program was born because visionary managers at the working level in the Air Force and Navy saw the greater value to DoD of consolidating a sustainment activity. Those same managers built the trust necessary to overcome the risks of doing business in a new way.

Air Force managers were properly concerned about loss of control over sustainment activities that support a component needed for readiness. The solution to this concern took a variety of forms. The program office is jointly manned. The No. 2 position is occupied by an Air Force lieutenant colonel, giving the Air-to-Surface PGM at Ogden and the Air Force chain of command a way to maintain close oversight. The Air Force will retain control of planning, programming, and budgeting for its needs, although consolidation of this function is an option for the future as confidence is built in both Services. The Odgen CAD/PAD personnel will continue as Air Force employees initially.

Another matter of great concern to managers at Ogden was the loss of workload at a time when workload is viewed as key to survival. Retaining the Ogden CAD/PAD personnel has preserved the workload, at least on paper, but the people and the capability they represent are still at risk in the next downsizing.

For the Navy's part, the biggest hurdle was acceptance of responsibility for an element of Air Force readiness. Surprisingly, this proved to be relatively easy. PMA-201 has had considerable experience with joint programs, including the Joint Stand-Off Weapon. As a result, they were very familiar with the benefits and challenges and, taking a DoD view, were convinced that a joint program for CAD/PAD made sense in today's environment.

Early Results and Lessons Learned

An early accomplishment of the joint program has been rapid and coordinated response to problems affecting readiness. Recently, the entire B-2 fleet was grounded for a brief period because of a design flaw in a time-delay initiator, a CAD/PAD device. But with the entire team, including the contractor, in place and in communication, a fix was developed, tested, approved, and installed in only a week, and the aircraft were returned to flight status.

In another success story, two items used for emergency inflation of a pilot's life vest, which were managed by the Defense Logistics Agency previously, have been transferred to the joint program. This move will result in cost savings of over $600,000 due to contracting efficiencies and establishment of a rework program. Two more items are scheduled for transfer soon with additional anticipated savings in the range of $1 to $2 million.

The key lesson to date has been the importance of having shared goals and objectives developed and reaffirmed through frequent teambuilding efforts. Continuous communication among team members is essential in this regard and is possible with modern informa-

tion technology despite the geographic barriers.

Future Plans

The business plan contains agreed-to first steps for operation of the Joint Program. These represent a "walk-before-run" approach so that the transition to joint operation will be transparent to the users. As the program gains experience, additional process consolidations will be considered. These include further consolidation of support functions such as contracting, combined Foreign Military Sales support, common requirements determination, and joint programming and budgeting, joint stock and inventory control.

Jointness is hard, and especially so when new concepts are involved. The CAD/PAD Joint Program was born because visionary managers at the working level in the Air Force and Navy saw the greater value to DoD of consolidating a sustainment activity. Those same managers built the trust necessary to overcome the risks of doing business in a new way.
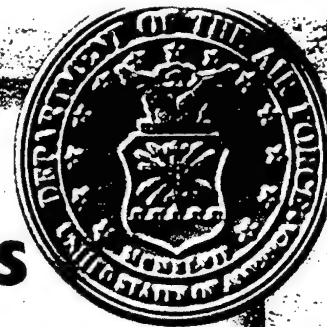
Air Force Computers Pass Milestone Test

SCOTT AIR FORCE BASE, Ill. (AFPN) – April 9 arrived, and Air Force computers never missed a beat. One of the first tests of the year 2000 bug proved to be a big "non-event," according to Jim Neighbors, Chief of the Year 2000 Management Office at the Air Force Communications Agency here.

April 9 was a key date because it is the 99th day of 1999 on the Julian-based calendar. A Julian calendar measures every day in the year and accumulates them without Gregorian month boundaries. Thus, April 9, 1999, would appear as "9999" in some systems.

There was concern that some systems might incorrectly interpret the alignment of 9999 to indicate an end-of-file marker and cause disruptions.

"The Air Force celebrated its first Y2K success when all systems continued to operate normally after the rollover to April 9," Neighbors said.

In preparation for the rollover, units throughout the world were notified to increase their awareness and review their Year 2000 continuity of operations plans.

In addition, organizations such as the Air Force Year 2000 Program Office and U.S. Strategic Command at Offutt Air Force Base, Neb., ran 24-hour Y2K help desks.

These monitored critical systems and key communications nodes in the Pacific and Europe as the clock advanced around the world.

To date, more than 94 percent of Air Force mission-critical systems have been renovated and tested. Systems are undergoing additional testing in operational evaluations designed to test mission-related scenarios.

During the April 8-9 rollover, according to Neighbors, experts tested or monitored several critical systems using Julian dates and found no errors.

Editor's Note: This information is in the public domain at **http://www.af.mil/news/** on the World Wide Web.

Corps of Engineers Employee Named Small Business Specialist of Year

GEORGE HALFORD

Washington, D.C. – Susan Price, Seattle District, U.S. Army Corps of Engineers, is the 1998 U.S. Army Small Business Specialist of the Year. She was selected from small business specialists from every installation, post, camp, and station in the U.S. Army.

In ceremonies today at the Corps' Washington, D.C., headquarters, Lt. Gen. Joe N. Ballard, Chief of Engineers and Tracey [Pinson], Director of the U.S. Army Small Business Office, cited Price for her personal commitment, technical expertise, and energetic approach to enhancing the success of the Small Business Program.

Under Price's leadership, the Seattle District's program excelled, with over half of all contract dollars awarded to small business enterprises, [Pinion] said. In addition, she said the district awarded 20 percent to small disadvantaged businesses and more than 11 percent to women-owned small businesses.

Ballard also presented Price with the Corps' Small Business Specialist of the Year Award. "Price's hard work," he said, "is allowing us to reach out and empower the small business community. The small business program is good for the Corps and good for the nation."

During the past year, Price developed, organized, and managed a regional Small Business Opportunity Fair. The small business community met with 105 exhibitors including large prime contractors, federal, state, and city procurement representatives. Price presented two educational seminars at the fair – "Doing Business with the Government via the Internet and Electronic Bid Sets" and "Internet Marketing through the U.S. Small Business Administration's Procurement Network."

Price is arranging an all-government fair with Navy, Air Force, General Services Administration, Small Business Administration, and Washington State participation. Consolidating all the public entities into one event will strengthen the regions' efforts to achieve common training goals for the small business community.

Price began her USACE career with the Seattle District in 1982 as a Contract Specialist and has been Seattle District's Small Business Specialist for more than eight years.

USACE exceeded all expectations in the Small Business Program in fiscal year 1998. USACE led all major Army commands in prime contract awards to small businesses, small disadvantaged businesses, and women-owned small businesses. USACE accounted for one-third of the Army's prime contract awards to small businesses, small disadvantaged businesses, and women-owned small businesses.

USACE maintains a strong outreach program designed to enhance small disadvantaged business participation in procurements. It includes participation in small business program conferences, seminars, and procurement fairs. Also, small disadvantaged businesses are actively counseled on how to do business with the U.S. Army Corps of Engineers.

The 3rd Annual USACE Small Business Conference is in Arlington, Va., Dec. 13-14, at the Crystal Gateway Marriott Hotel. The conference provides small businesses with information about USACE engineering, construction, environmental, and research and development activities.

The purpose of the conference is to increase their ability to compete and win contracts. One of the high points of the conference is the Small Business Opportunities Fair, Tuesday, Dec 14. The fair provides a direct exchange of information between USACE District Commanders and small businesses. Additional information about the conference is on [the] Small Business Web site: **http://www.usace.army.mil/inet/functions/sb/**

Editor's Note: Halford is with the Public Affairs Office, Headquarters, U.S. Army Corps of Engineers. This information is in the public domain at **http://www.dtic.mil/armylink/news/** on the World Wide Web.

Cohen Reports to Vice President

DoD Year 2000 Acquisition Goals

As a participant in the National Partnership for Reinventing Government and a designated High Impact Agency, Secretary of Defense William S. Cohen reported to the Vice President April 2 on DoD's progress toward achieving Year 2000 Acquisition Goals. The report, second in a series of six semiannual reports, was written in plain language to provide the American public a clear picture of progress in reinventing Defense Acquisition.

In his second report, Cohen outlined the Department's three-year goals, actions taken, and progress to date. The three-year goals were founded on the objectives of Delivering Great Service, Fostering Partnership, and Internal Reinvention that the administration set forth in the Blair House Papers.

"We chose goals," Cohen stated in the report, "both consistent with the vision, strategy, and plan articulated in our Quadrennial Defense Review and established in our FY 1998 Annual DoD Strategic Performance Plan under the Government Performance and Results Act."

This excerpt from the report presents only the three-year goals and actions taken. To read about measuring DoD's progress to date, download the entire report at **http://www.acq.osd.mil/ar/vpreport4-99/default.htm** on the World Wide Web.

Delivering Great Service

We are becoming a world-class service provider! We are delivering weapons quicker than before. We are supplying our warfighters and peacekeepers better, cheaper, and faster. We are cutting bureaucratic red tape by using Government Purchase Cards for small purchases. And

"WE CHOSE GOALS BOTH CONSISTENT WITH THE VISION, STRATEGY, AND PLAN ARTICULATED IN OUR QUADRENNIAL DEFENSE REVIEW AND ESTABLISHED IN OUR FY 1998 ANNUAL DOD STRATEGIC PERFORMANCE PLAN UNDER THE GOVERNMENT PERFORMANCE AND RESULTS ACT."

we are enhancing our skills by providing our DoD acquisition-related workforce knowledge, tools, and techniques through continuing education.

New Weapons in Less Time

Deliver new major defense systems to the users in 25-percent less time.

In the past, we were more concerned with focusing on performance than about how long it took to field systems. During the Cold War era, the threat environment was stable and predictable, and thus program schedule received much less emphasis than system cost and performance.

We must buy our systems faster and field them sooner. The Cold War is over, and the threat environment is now unstable and constantly changing. Therefore, we need to be more flexible and responsive in meeting the needs of our warfighters by fielding new systems in much less time. We expect that shorter cycle time will reduce cost growth and accelerate our modernization efforts.

Our goal is to reduce the cycle time of new programs (i.e., the time between starting a new program and achieving initial delivery) by 25 percent. That means the average cycle time of new programs, which started since 1992, will be less than 99 months by the end of the year 2000 – a 25-percent reduction from the recent historical average of 132 months (based on average cycle time of currently active programs started prior to 1992).

Since 1992, we have employed acquisition reform such as the use of commercial items, and the latest computer technologies in the design, manufacturing, and management of our programs. They have helped us in reducing cycle time, but we plan to do much more in order to reduce cycle time by at least 25 percent. Therefore we will:

- Use shorter cycle time as a planning constraint in structuring new programs.

- Strictly enforce shorter cycle time in approving new programs.
- Closely monitor programs in the process of acquiring, programming, and budgeting to limit cycle time growth.

In addition, we are changing the way we manage our programs to achieve shorter cycle time. Specifically, we are emphasizing the urgency of near-time requirements and the availability of proven technologies as key criteria in authorizing new programs. This means that we can now satisfy warfighter needs incrementally - by infusing new technologies, as they become available with each subsequent delivery.

Our Three-Year Goal
To achieve visibility of 90 percent of DoD materiel assets while resupplying military peacekeepers and warfighters and reducing average order-to-receipt time by 50 percent.
Our primary job is to supply our customer — the warfighters —with the products they need, when they need them. Today, this job is not being done as effectively as world-class companies, which respond far more quickly to customer orders than we do.

Taking Action
Better logistics supply services are first and foremost about gathering and using information about our inventories far more effectively than before. To this end, we will integrate our existing information systems better and build new information systems when necessary.

With our important new DoD Total Asset Visibility program, we will have direct access to timely, accurate information on the status, location, and movement of units, personnel, equipment, and supplies. By November 2000, we will also have the ability to redistribute inventories on-time to where they are needed most.

We will also use information systems to reduce delivery times by relying on electronic, rather than paper, transactions with our vendors. We will further reduce delivery times by using commercial prac-

tices, such as contracting with vendors to provide direct support, and using faster transportation services to respond more quickly to customer orders. All of these steps will enable us to meet our customers' needs more rapidly, improving military readiness, while reducing inventory and delivery costs.

Similarly, we will encourage our vendors to process our orders quicker by adopting flexible manufacturing practices.

Our Three-Year Goal
Simplify purchasing and payment through use of purchase card transactions for 90 percent of all DoD micropurchases while reengineering the processes for requisitioning, funding, and ordering.
When we buy a product for less than $2,500, we call it a micropurchase. In the past, we treated micropurchases like all other purchases. When we wanted to order an inexpensive product, we used a form that required lots of review and approval. Needless to say, this bureaucratic work added significantly to the real cost of the product and to the time it took to receive the order.

Today, we don't use this inefficient process. Instead, we use the Government Purchase Card in much the same way the public uses commercial bank credit cards to purchase items. Our Simplifying buying of goods and services goal is to increase our use of the Government Purchase Card for micropurchases, while making our ordering and buying processes more efficient and cost effective.

The Army estimates that it saves $92 per transaction when supplies or services are bought with the Government Purchase Card. It just makes more sense to spend this money helping our warfighters, rather than on unproductive paperwork.

Taking Action
Last year, we started to remove bureaucratic roadblocks to using Government Purchase Cards for micropurchases except in a few special cases. We are work-

ing to limit these special cases to a bare minimum.

We are also reorganizing our traditional requisition and ordering system to match these new conditions. In 1997 alone, we used the Government Purchase Card for five million contracting micropurchases that used to rely on the traditional system.

Our Three-Year Goal
Create a world-class learning organization by offering 40 or more hours annually of continuing education and training to the DoD acquisition-related workforce.
In the last few years, we have undergone dramatic changes in how we buy goods and services. We made these changes to facilitate better, cheaper, and faster support to the warfighters.

Many of these changes are based on best commercial practices. These practices are often very different from the way we performed our jobs in the past.

We offer quality education and training to help our buyers adjust to this new environment. This education and training includes not only a description of the new practices, but also an understanding of why these changes are being made.

To become a better acquisition workforce, we must continue our training throughout our careers to ensure that we stay current with best commercial and government practices. Only by continuing our education can we avoid creating a new system as rigid as the old.

Taking Action
We plan to meet our three-year goal of educating the defense acquisition workforce by having our people take a mandatory 40 hours of continuing education annually, or 80 hours over two years.

In the near term, most of this training will take place in traditional classrooms. We are, however, rapidly expanding our use of computing and telecommunications technology to provide more cost-effective and timely training via satellite

and the interactive environment of the Internet.

Our acquisition workforce also now takes training in other fields to expand their expertise and certifications. This opportunity will make them better rounded in their daily duties, as well as enhance their job satisfaction.

Fostering Partnership

We are reducing our costs by working more closely with our customers, the warfighters, and our local communities! We are using the savings to buy modern weapons. We are turning over land we don't need to local communities and getting out of the landlord business. We are using computers to eliminate excessive and time-consuming paper transactions. We are ever mindful of our environmental trust, and we are improving where we live and work by reducing the release of toxic chemicals.

Modernizing Defense

OUR THREE-YEAR GOAL

With no top-line budget change, achieve annual defense procurement of at least $54 billion toward a goal of $60 billion in 2001. After the Cold War, we decreased defense spending dramatically. This reduction was particularly significant in the buying of new weapons and equipment. At the time, this made sense because our inventory of newer weapons was sufficient to meet the needs of our reduced troop levels. Older weapons and equipment were retired.

Over the intervening years, we further reduced our budget for buying new weapons by spending on unplanned events, such as regional conflicts, peacekeeping, and humanitarian missions.

Today, our defense inventory is showing its age with much now needing to be replaced. As the level of technology used by our potential adversaries increases, we need to continue fielding new weapons and equipment to maintain our military edge.

To meet our goal of Modernizing defense, we will increase our annual budget for new weapons and equipment to at least $54 billion in the year 2000 and $60 billion by the year 2001. This represents an increase of almost $10 billion over the 1997 budget.

Progress

We increased procurement funding by fully implementing the recommendations of our Quadrennial Defense Review and continuing with the Defense Reform Initiative. These senior-level reviews lead us to free more money for buying new weapons and equipment by:
- Better planning for operating and support costs.
- Further cutting our troop levels.
- Reforming our business practices.
- Streamlining our acquisition and logistics workforce.

Due to an emergent need to address near-term readiness concerns, the Department was only able to budget $53 billion for procurement in the year 2000, which is just short of the goal. The Department is on target, however, towardsachieving its $60-billion goal ($61.8 billion is budgeted) in procurement funding in 2001.

Despite this shortfall, this goal has been a success story. The Department made great strides in reducing cost growth in the operations and maintenance accounts that causes the migration of funds from investment accounts. Throughout the last three years, the Department has consistently increased procurement funding such that we can begin modernization of our operating forces. During the goal timeframe (1997-2000), procurement funding has experienced a real growth of 14 percent.

Getting Out of the Landlord Business

OUR THREE-YEAR GOAL

In the spirit of fostering partnerships and community solutions, DoD will complete disposal of 50 percent of the surplus property baseline and privatize 30,000 housing units.
We are the nation's largest landlord. We own hundreds of military facilities and thousands of apartments and houses in the United States.

Today, we are getting rid of land we no longer need and are inviting private companies to build and operate our housing units. These actions will save money and rebuild our local and base communities, while improving the quality of life for our troops.

On the recommendation of the bipartisan Base Realignment and Closure Commissions (1988 - 1995), we are closing 97 major military bases and restructuring 55 major bases. We have already saved $14 billion from these and related actions.

We are working closely with local communities to minimize the negative consequences of these closures. We are providing communities with technical assistance and grants to help them con-

vert these properties to sources of new jobs.

We also currently own about 300,000 family apartments and homes in the United States. More than 60 percent of these properties need to be renovated or replaced. We have invited the real estate industry to apply commercial practices to improve these properties and help us in saving the taxpayer some of the $20 billion these repairs would have traditionally cost.

TAKING ACTION

Selling, leasing, and transferring government real estate isn't easy. We have overcome numerous legal, financial, and environmental hurdles to achieve our goal of Partnering with communities in three years. By partnering with our local communities, we are reusing excess government property more efficiently, re-developing closed bases as centers for job creation and community activities, and producing cost savings that can be put back into force modernization and readiness.

We are continuing to work with Congress to write new laws to ease this task in the future. We regularly review past property transfers to make sure they worked out right. Moreover, we are reaching out to local communities to hear their concerns as we strive to reach this goal in partnership.

Decreasing Paper Transactions

OUR THREE-YEAR GOAL

Decrease paper transactions by 50 percent through electronic commerce and electronic data interchange (EC/EDI).

Industry is rapidly moving away from paper-based business practices toward electronic commerce and electronic data interchange. While we have made some progress in this area, we are lagging behind industry.

To make up for lost time, we are:

- Setting up computer networks for all our people.
- Removing regulations and other barriers to exchanging information electronically.

- Improving our business practices to take advantage of information technology advancements.

The goal of Decreasing paper transactions is to accelerate our transition from paper to electronic transactions. This will cut down our paperwork and that required of companies doing business with us. Paperless transactions will improve efficiency and effectiveness, and reduce processing times and costs, while providing more timely insight.

TAKING ACTION

Filling out paperwork required to do business with us can be burdensome. Too many forms, redundant questions, and requests for unnecessary information are leading reasons for some of the frustrations we feel.

The goal of Decreasing paper transactions is to:

- Limit paperwork.
- Provide timely payments.
- Minimize repeated requests for the same information.
- Make DoD information more accessible through electonic media.
- Improve data accuracy.
- Make communications with industry easier and faster.

We are continuing on our three-year effort to increase paperless electronic business transactions and improve business practices.

To move away from our paper-based system, we are capitalizing on electronic contracting, program management, and logistics support information. By doing this, we will reduce the time and cost to do our job and thereby provide better support to the warfighters.

The business efficiencies of digital transactions will significantly reduce the total costs of owning, operating, and maintaining our weapons and equipment.

Reducing Toxic Pollution

OUR THREE-YEAR GOAL

Reduce total releases of toxic chemicals by a further 20 percent.

In 1994, we began to submit annual reports to the Environmental Protection Agency on our usage of a number of toxic chemicals. In 1994, we released or shipped from military bases 10.6 million pounds of these chemicals. In 1995, we reduced these releases and shipments by 36 percent to 6.7 million pounds. We did this by adopting a strong pollution prevention program and reducing polluting activities.

By decreasing these toxic chemicals, we avoid spending money on extra paperwork, special handling, and disposal. Most importantly, we improve the environment for everyone. Our Reducing toxic pollution goal is to reduce the use of toxic chemicals a further 20 percent.

TAKING ACTION

We are finding new products and processes that do not rely on toxic chemicals and are substituting them where possible.

We are working in partnership with industry to reduce or eliminate toxic chemicals used in manufacturing weapons. We are making it much easier for the defense industry to find alternatives to using toxic chemicals.

Minimizing the use of toxic chemicals in manufacturing weapons also reduces the use of toxic chemicals on military bases that operate, maintain, and repair the weapons.

DoD Internal Reinvention

We are changing the way we do business! We are developing an implementation strategy to better identify our costs to specific outputs. We are selling off unneeded stockpile materials and government-owned property, while cutting our supply inventories to match the current needs of our warfighters and peacekeepers.

Moreover, we are controlling cost growth in our major weapons programs. Our stewardship of defense resources is a public trust. We are tightening our belt to have a lean, empowered acquisition workforce and an effective fighting force for the 21st century.

Streamlining Our Workforce

Our Three-Year Goal

Eliminate layers of management through streamlined processes while reducing the DoD acquisition-related workforce by 15 percent.

Since 1989, we have reduced our acquisition workforce by over 40 percent. We are streamlining our organizations further and reducing our workforce by an additional 15 percent by the year 2000. We are resizing our workforce to match our workload more efficiently for the 21st century.

Taking Action

We cannot accept any inefficiencies in our acquisition workforce, when money for our customer, the warfighter, is tight. We are reengineering our processes, eliminating redundant work and simplifying procedures. We are giving program teams more responsibility and cutting unnecessary reviews and oversight. As a result of these changes, we are less bureaucratic and more professional, and we are continuously looking for additional opportunities to do business better, cheaper, and faster with fewer people.

Providing Effective Cost Accounting

Our Three-Year Goal

Define requirements and establish an implementation plan for a cost accounting system that provides routine visibility into weapon system life cycle costs through activity-based costing and management. The system must deliver timely, integrated data for management purposes to permit understanding of total weapon costs, provide a basis for estimating costs of future systems, and feed other tools for life cycle cost management.

One of the biggest obstacles we face in controlling and managing the cost of weapons and equipment for their entire useful life is the lack of a common, robust, cost accounting process. Our current systems do not communicate with each other effectively, nor do they add all of the costs of many activities in a manner that is most useful to management. As a result, they give us only limited insight into the total cost of buying, using, maintaining, and disposing of our inventories.

Our Providing effective cost accounting goal is to develop a plan for a new, DoD-wide cost accounting process by the year 2000.

Taking Action

We are working closely with outside consultants to assess current cost accounting initiatives. We are talking to our customers throughout the DoD to define common requirements for a new cost accounting process.

Reducing Excess Inventories

Our Three-Year Goal

Dispose of $2.2 billion in excess National Defense Stockpile inventories and $3 billion of unneeded government property while reducing supply inventory by $12 billion.
After the end of the Cold War, we found ourselves with a huge inventory of materials and supplies that we no longer needed. By using up, selling, or otherwise disposing of this inventory, we are recovering and reducing costs by billion of dollars. We will use this money for military modernization, operations, and maintenance.

The National Defense Stockpile is a large inventory of strategic and critical materials set aside for a national emergency. The market value of the 1997 stockpile was $5.3 billion. We can sell or otherwise dispose of excess inventory after we receive the proper authority from Congress. By law, however, we must try to avoid causing undue market disruption. Our goal is to dispose of $2.2 billion in excess stockpile inventories by the year 2000.

We are also working to reduce the amount of DoD property held by defense contractors. We often loan contractors government tooling or equipment to perform defense-unique tasks. Since the 1980s, the original value of our property in contractor hands has grown in spite of repeated efforts to curb growth. Our goal is to dispose of $3 billion worth by the year 2000.

Finally, we are looking to Reduce excess inventories to match the current needs of our reduced troop levels. From a 1989 high valued at $107 billion, we are now reducing from $68 to $56 billion by 2000.

Taking Action

We are aggressively marketing to sell our inventory of critical and strategic materials. We are working closely with Congress and industry to ensure that we receive a good price for our inventory without unfairly undermining the commercial market.

In the future, to reduce the amount of government property held by contractors, we will rely on commercial suppliers to use their own equipment.

To reduce our excess supply inventory, we are being more selective in what we buy and how we buy it. We are improving equipment reliability, decreasing order and delivery times, and bypassing government warehouses.

Minimizing Weapons Cost Growth

Our Three-Year Goal

Minimize cost growth in major defense acquisition programs to no greater than one percent annually.
Historically, we have overspent our original budgets for major new weapons. Some of this cost growth was necessary to deal with changes in technology. Schedule slips and inaccurate estimates of the original cost have caused additional cost growth. Our goal is to minimize cost growth during the development and production of major new weapons by achieving greater program stability.

Taking Action

To control the cost growth we are continuing to:

- Monitor major weapon programs quarterly for cost growth.
- Focus on cost growth when making programming and budgeting decisions.
- Look closely at how much money programs are asking for in the program acquisition process.

We are measuring our progress and studying additional actions to keep cost growth below 1 percent.

GPS Users Must Ensure Receiver Compliance

PETERSON AIR FORCE BASE, Colo. (AFPN) – The Global Positioning System, made famous by Desert Storm, is an integral navigational tool for both military and civilian users because of its accuracy and flexibility. However, there are two upcoming events that may affect civil GPS users and government users of commercially procured receivers – the GPS End of Week rollover and Year 2000 issues.

The GPS EOW rollover happens every 20 years. Because GPS system time, counted in weeks, started counting Jan. 6, 1980, at midnight between Aug. 21 and 22, the GPS week will roll over from week 1023 to 0000. This is significant because it is the first EOW rollover since the GPS constellation was established and could be interpreted as an invalid date in GPS receivers that were not designed to meet GPS specifications.

The GPS Y2K issue stems from the fact that many computer programs use a two-digit date field and assume that the year is 19XX. When 2000 occurs within the program, the two-digit date becomes "00" and could be interpreted as an invalid date. As with the EOW rollover, if receivers were manufactured according to GPS specifications, then this issue will not be a problem.

The Department of Defense is the service provider for GPS with direct control of the overall GPS service. The DoD's GPS Joint Program Office has verified that all generations of GPS satellites and ground support systems are Y2K- and EOW-compliant. This means that the GPS navigation signal will continue to be delivered during and after each of these events.

The U.S. Air Force GPS Joint Program Office has conducted extensive testing of military receivers. The results of these tests may be viewed at the GPS JPO Y2K Web site (**http://www.laafb.af.mil/SMC/CZ/homepage/y2000/index.html**). Military users of commercial GPS receivers can also check the GPS JPO Y2K Web site or contact receiver manufacturers to verify receiver EOW and Y2K compliance.

End-user systems are the receivers and applications that use GPS and have no controlling entity. It is these users that must verify that their receivers and applications, like electronic charting systems, will also work properly throughout these events. There are several initiatives in place to inform and educate civil users regarding GPS Y2K and EOW issues; however, it remains the responsibility of users to determine if their particular receivers and applications are Y2K- and EOW-compliant.

The Department of Transportation is the primary interface for all civil GPS matters and created the Civil GPS Service Interface Committee to meet this obligation. Since 1996, this committee has been actively informing the public about GPS Y2K and EOW issues. Relevant information, such as a list of receiver manufacturers and points of contact for the public, is posted on the Coast Guard Navigation Center's Web site at **http://www.navcen.uscg.mil**.

Editor's Note: This information is in the public domain at **http://www.af.mil/news/** on the World Wide Web.

Did Anyone See

Several adult volunteers from the staff and faculty, DSMC, and a few very special local teens learned that it doesn't take much to spread a little happiness around. On March 27 they were privileged to host 54 exceptional children, ages 3 to 10, at the DSMC Annual Easter Egg Hunt. Easter Bunny, taking time from his busy schedule, was the guest of honor.

For the last 12 years, DSMC's Video Services Department, working with Alma Keating, Army Community Services (ACS), Fort Belvoir, Va., has hosted an Annual Easter Egg Hunt in conjunction with the ACS Exceptional Family Member Program. Keating works with the families, while DSMC provides hotdogs, chips, soda, juice, toys, and baskets. These items are either donated by various commissary vendors or purchased with money from DSMC fundraisers. This year's event, coordinated by Air Force Master Sgt. Andrea Hamilton, came to around $750 -- money well spent in view of the smiles and laughter of 54 very *exceptional* children!

Editor's Note: Thanks go to DSMC professor Bob Carlson for arranging Mr. Bunny's visit.

HEATHER DENNY CHECKS TO ENSURE MR. BUNNY'S BASKETS ARE READY.

MR. BUNNY WITH ANNIE SMITH AND KEITH CARAMA.

DALLAS DOERMANN

ARMY SGT. MAJ. RON KIMMEL WITH ANNA KIMMEL.

Photos by Army Sgt. Richard Vigue, Navy Journalist 2nd Class Melanie Barnett, & Air Force Staff Sgt. Dave DeBolt

DSMC Easter Egg Hunt '99

Big Bunny Pass By Here?
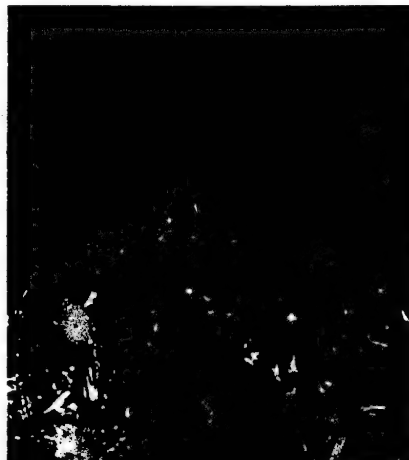
CRYSTAL DENNY GIVES DSMC PROVOST & DEPUTY COMMANDANT, RICH REED, A NEW LOOK.

1999 DSMC ANNUAL EASTER EGG HUNT VOLUNTEERS.

FROM LEFT: CRYSTAL DENNY; ANNIE GLENDINNING; HEATHER DENNY.

MR. BUNNY POSES FOR HIS OFFICIAL PHOTO WITH VOLUNTEER, NAVY IC2 ROBIN KELSICK.

EASTER BUNNY

Regina Zacherl with Mr. Bunny

From left: Shannon, Dallas, and Michael Doermann.

Mr. Bunny with Laura Jacobs. (Laura is Colin Jacobs' twin sister.)

From left: Colin Jacobs; Paul Jacobs

DSMC Easter Egg Hunt '99
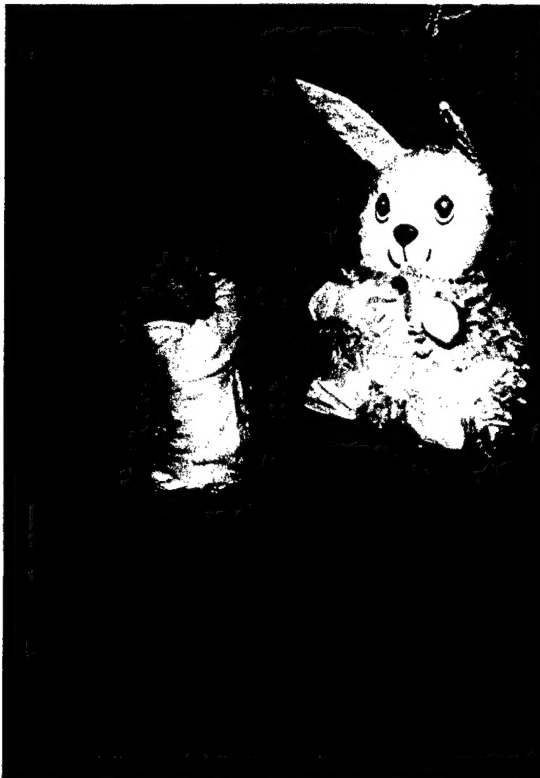
Danny Sullivan chases a balloon. Ready to assist is dad, Jerry Sullivan.

Dallas Doermann takes aim at an Easter pinata.

Ashley Russell gets an Easter face painting from Navy Journalist 2nd Class Melanie Barnett. Ashley is the daughter of DSMC's Senior Enlisted Advisor, AWCS Scott Russell.

Nathan Adams

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DEPARTMENT OF DEFENSE

Under Secretary of Defense (Acquisition and Technology) (USD[A&T])
http://www.acq.osd.mil/
ACQWeb offers the Defense Federal Acquisition Regulation Supplement online, a library of USD(A&T) documents, and jump points to many other valuable sites

Deputy Under Secretary of Defense (Acquisition Reform) (DUSD[AR])
http://www.acq.osd.mil/ar
Hot topics in AR; reference library; *AR Today* and *AR Now*; DUSD(AR) organizational breakout; "Ask a Professor" assistance

Acquisition Systems Management (Defense Acquisition Board [DAB] Executive Secretary)
http://www.acq.osd.mil/api/asm/
Documentation, including Department of Defense Directives 5000.1 and 5000.2-R, Major Defense Acquisition Programs List, and more.

Director, Test, Systems Engineering & Evaluation (DTSE&E), USD(A&T)
http://www.acq.osd.mil/te/programs/se
Systems engineering mission; Defense Acquisition Workforce Improvement Act information, training, and related sites; information on key areas of systems engineering responsibility

Defense Acquisition Deskbook
http://www.deskbook.osd.mil
Automated acquisition reference tool covering mandatory and discretionary practices as well as procurement wisdom.

Defense Acquisition University (DAU) and Acquisition Reform Communications Center (ARCC)
http://www.acq.osd.mil/dau
DAU course and schedule information; consortium school links; acquisition documents and publications. ARCC provides Acquisition Reform training information, including satellite broadcast information!

Army Acquisition Corps (AAC)
http://www.dacm.sarda.army.mil
News; policy; publications; contacts; training opportunities.

Army Acquisition
http://www.acqnet.sarda.army.mil
Documents library; training and business opportunities; past performance; paperless contracting; labor rates.

Navy Acquisition Reform
http://www.acq-ref.navy.mil/
Information on Industrial Base Integration, World-class Practices, the Acquisition Center of Excellence, and training opportunities.

Navy Acquisition, Research and Development Information Center
http://nardic.nrl.navy.mil
News; announcements; acronyms; publications and regulations; technical reports; "How to Do Business with the Navy."

Naval Sea Systems Command
http://www.navsea.navy.mil/sea017/toc.htm
Total Ownership Cost (TOC); Background and Documentation; Reduction Plan; Implementation Timeline; Process; TOC reporting templates.

Air Force (Acquisition)
http://www.safaq.hq.af.mil/
Reducing TOC; career development and training opportunities; library; links.

Air Force Materiel Command (AFMC) Contracting Laboratory's Federal Acquisition Regulation (FAR) Site
http://farsite.hill.af.mil/
FAR search tool; *Commerce Business Daily* Announcements (CBDNet); Federal Register; Electronic Forms Library.

Headquarters, Air Combat Command (HQ ACC Contracting Division)
http://www.acclog.af.mil/lgc/lgc.htm
Business opportunities; acquisition regulations; policy guidance and technical assistance in areas such as: performance measurement, International Merchant Purchase Authorization Card (IMPAC); commercial practices; outsourcing and more.

Defense Systems Management College (DSMC)
http://www.dsmc.dsm.mil
DSMC educational products and services; course schedules; *Program Manager* magazine and *Acquisition Review Quarterly* journal; job opportunities.

Defense Advanced Research Projects Agency (DARPA)
http://www.darpa.mil
News releases; current solicitations; "Doing Business with DARPA."

Defense Information Systems Agency (DISA)
http://www.disa.mil
Structure and mission of DISA; Defense Information System Network; Defense Message System; much more!

National Imagery and Mapping Agency (NIMA) [Formerly Defense Mapping Agency (DMA)]
http://www.nima.mil
Geospatial and imagery information; publications; business opportunities.

Defense Modeling and Simulation Office (DMSO)
http://www.dmso.mil
DoD Modeling and Simulation Master Plan; services; resources; activities.

Defense Technical Information Center (DTIC)
http://www.dtic.mil/
Scientific and technical reports; products and services; registration with DTIC; special programs; much more!

Joint Electronic Commerce Program Office (JECPO)
http://www.acq.osd.mil/ec/
Policy; newsletters; Central Contractor Registration; Value Added Networks; assistance centers; Electronic Commerce/Electronic Data Interchange (EC/EDI) Handbook; EC training.

Open Systems Joint Task Force
http://www.acq.osd.mil/osjtf
Open Systems education and training opportunities; studies and assessments; projects, initiatives and plans; reference library.

Government Education and Training Network (GETN) (For Department of Defense Only)
http://atn.afit.af.mil/schedule.htm
Schedule of distance learning opportunities.

Government-Industry Data Exchange Program (GIDEP)
http://www.gidep.corona.navy.mil
Federally funded co-op of government and industry participants that provides an electronic forum to exchange technical information essential during research, design, development, production and operational phases of the life cycle of systems, facilities, and equipment.

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